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<b>(21) International Application Number:</b> PCT/US00/06112  <b>(22) International Filing Date:</b> 9 March 2000 (09.03.00)  <b>(30) Priority Data:</b> 09/266,513      11 March 1999 (11.03.99)      US 60/149,485      18 August 1999 (18.08.99)      US  <b>(71) Applicants (for all designated States except US):</b> GENESIS RE- SEARCH AND DEVELOPMENT CORPORATION LTD [NZ/NZ]; 1 Fox Street, Parnell 1001 (NZ). FLETCHER CHALLENGE FORESTS LTD. [NZ/NZ]; 585 Great South Road, Penrose, Auckland (NZ).  <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> WOOD, Marion [GB/NZ]; 30 Brown Street, Ponsonby, Auckland (NZ). MCGRATH, Annette [IE/NZ]; 56 Rose Road, Ponsonby, Auckland (NZ). SHENK, Michael, A. [US/NZ]; 39 Cape Horn Road, Waikowhai, Auckland (NZ). GLENN, Matthew [GB/NZ]; 26A Harrybrook Road, Green Bay, Auckland (NZ).  <b>(74) Agents:</b> SPECKMAN, Ann et al.; 2601 Elliott Avenue, Suite 4185, Seattle, WA 98121 (US).		<b>(81) Designated States:</b> AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>Without international search report and to be republished          upon receipt of that report.</i>
<b>(54) Title:</b> COMPOSITIONS AND METHODS FOR THE MODIFICATION OF GENE TRANSCRIPTION  <b>(57) Abstract</b>  Novel isolated polynucleotides that encode plant transcription factors are provided, together with DNA constructs comprising such polynucleotides. Methods for using such constructs in modulating the expression of endogenous and/or heterologous genes are also disclosed, together with transgenic plants comprising such constructs.		

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## COMPOSITIONS AND METHODS FOR THE MODIFICATION OF GENE TRANSCRIPTION

### Technical Field of the Invention

5           This invention relates to compositions isolated from plants and their use in the modification of gene transcription and/or expression. More specifically, this invention relates to plant polynucleotide sequences encoding transcription factors that are components of the cellular transcription apparatus and the use of such polynucleotide sequences in the modification of gene expression.

### Background of the Invention

10           Eucaryotic gene expression is regulated, in part, by the cellular processes involved in transcription. During transcription, a single-stranded RNA complementary to the DNA sequence to be transcribed is formed by the action of RNA polymerases. Initiation of  
15 transcription in eucaryotic cells is regulated by complex interactions between *cis*-acting DNA motifs, located upstream of the gene to be transcribed, and *trans*-acting protein factors. Among the *cis*-acting regulatory regions are sequences of DNA, termed promoters, which are located close to the transcription initiation site and to which RNA polymerase is first bound, either directly or indirectly. Promoters usually consist of  
20 proximal (*e.g.*, TATA box) and more distant elements (*e.g.*, CCAAT box). Enhancers are *cis*-acting DNA motifs which may be situated further up- and/or down-stream from the initiation site.

25           Both promoters and enhancers are generally composed of several discrete, often redundant, elements each of which may be recognized by one or more *trans*-acting regulatory proteins, known as transcription factors. Regulation of the complex patterns of gene expression observed both spatially and temporally, in all developing organisms, is thought to arise from the interaction of enhancer- and promoter-bound, general and tissue-specific transcription factors with DNA (Izawa T, Foster R and Chua NH, *J. Mol. Biol.* 230:1131-1144, 1993; Menkens AE, Schindler U and Cashmore AR, *Trends in*  
30 *Biochem. Sci.* 13:506-510, 1995). Developmental decisions in organisms as diverse as *Drosophila melanogaster*, *Saccharomyces cerevisiae*, *Arabidopsis thaliana* and *Pinus radiata* are regulated by transcription factors. These DNA-binding regulatory molecules

have been shown to control the expression of genes responsible for the differentiation of different cell types, for example, the differentiation of leaf trichomes and xylem tissue in *Arabidopsis thaliana*, formation of endoderm from embryonic cells in *Xenopus laevis* and the initiation of gene expression in response to environmental and phytohormonal stress in plants (Yanagisawa S and Sheen J, *The Plant Cell* 10:75-89, 1998).

Transcription factors generally bind DNA in a sequence-specific manner and either activate or repress transcription initiation. The specific mechanisms of these interactions remain to be fully elucidated. At least three separate domains have been identified within transcription factors. One is essential for sequence-specific DNA recognition, one for the activation/repression of transcriptional initiation, and one for the formation of protein-protein interactions (such as dimerization). Four motifs, or domains, involved in DNA sequence recognition and/or transcription factor dimerization have been identified to date: zinc fingers; helix-turn-helix; leucine zipper; and helix-loop-helix. Both helix-loop-helix and leucine zipper protein motifs have been implicated in the binding of transcription factors to DNA via their ability to readily form homo- or hetero-dimers *in vivo*. "Activating" domains are rich in either proline, glutamine or acidic amino acids. It has been proposed that this net negative region of the transcription factor interacts with the TATA box-binding transcription factor TFIID, RNA polymerase, and/or another protein associated with the transcription apparatus.

Studies indicate that many plant transcription factors can be grouped into distinct classes based on their conserved DNA binding domains (Katagiri F and Chua NH, *Trends Genet.* 8:22-27, 1992; Menkens AE, Schindler U and Cashmore AR, *Trends in Biochem. Sci.* 13:506-510, 1995; Martin C and Paz-Ares J, *Trends Genet.* 13:67-73, 1997). Each member of these families interacts and binds with distinct DNA sequence motifs that are often found in multiple gene promoters controlled by different regulatory signals. Several classes of transcription factors that have been identified to date are described below.

**The basic/leucine zipper (bZIP)** is a conserved family of transcription factors defined by a basic/leucine zipper (bZIP) motif (Landschultz et al., *Science* 240:1759-1764, 1988; McKnight, *Sci. Am.* 264:54-64, 1991; Foster et al., *FASEB J.* 8[2]:192-200, 1994). Transcriptional regulation of gene expression is mediated by both the bZIPs and other families of transcription factors, through the concerted action of sequence-specific transcription factors that interact with regulatory elements residing in the promoter

regions of the corresponding gene. The bZIP bipartite DNA binding structure consists of a region enriched in basic amino acids (basic region) adjacent to a leucine zipper that is characterized by several leucine residues regularly spaced at seven amino acid intervals (Vinson et al., *Science* 246:911-916, 1989). Whereas the basic region directly contacts the DNA, the leucine zipper mediates homodimerisation and heterodimerisation of protein monomers through a parallel interaction of the hydrophobic dimerization interfaces of two  $\alpha$ -helices, resulting in a coiled-coil structure (O'Shea et al., *Science* 243:538-542, 1989; *Science* 254:539-544, 1991; Hu et al., *Science* 250:1400-1403, 1990; Rasmussen et al., *Proc. Natl. Acad. Sci. USA* 88:561-564, 1991).

**Dof proteins** are a relatively new class of transcription factor and are thought to mediate the regulation of some patterns of plant gene expression in part by combinatorial interactions between bZIP proteins and other types of transcription factors binding to closely linked sites. Such an example of this combinatorial interaction has been observed between bZIP and Dof transcription factors (Singh, *Plant Physiol.* 118:1111-1120, 1998). These Dof proteins possess a single zinc-finger DNA binding domain that is highly conserved in plants (Yanagisawa, *Trends Plant Sci.* 1:213, 1996). Specific binding of the Dof protein to bZIP transcription factors has been demonstrated and it has been proposed that this specific interaction results in the stimulation of bZIP binding to DNA target sequences in plant promoters (Chen et al., *Plant J.* 10:955-966, 1996). Examples of such Dof/bZIP interactions have been reported in the literature, including for example, the *Arabidopsis thaliana* glutathione S-transferase-6 gene (GST6) promoter which has been shown to contain several Dof-binding sites closely linked to the ocs element, a recognized bZIP binding site (Singh, *Plant Physiol.* 118:1111-1120, 1998).

**The bZIP family of G-box binding factors** from *Arabidopsis* (including GBF1, GBF2 and GBF3, for example) interact with the palindromic G-box motif (CCACGTGG). However, it has been demonstrated that the DNA binding specificity of such transcription factors, for example GBF1, may be influenced by the nature of the nucleotides flanking the ACGT core (Schindler et al., *EMBO J.* 11:1274-1289, 1992a). *In vivo* transient and transgenic plant expression studies have shown that these ACGT elements are necessary for maximal transcriptional activation and have been identified in a multitude of plant genes regulated by diverse environmental, physiological, and environmental cues. Classification of these transcription factors based upon their ability

to bind to the ACGT core motif yielded a relatively diverse group of proteins, including, for example the CamV 35S promoter as-1-binding protein which exhibits DNA binding site requirements distinct from those proteins interacting with the G-box (Tabata et al., *EMBO J.* 10:1459-1467, 1991). Thus, in addition to defining the individual classes of bZIP proteins on the basis of their DNA binding specificity, such proteins can also be classified according to their heterodimerisation characteristics (Cao et al., *Genes Dev.* 5:1538-1552, 1991; Schindler et al., *EMBO J.* 11:1261-1273, 1992b).

Environmentally inducible promoters require the presence of two cis-acting elements, critical for promoter activity, one of which is the moderately conserved G-box (CCACGTGG) (deVetten et al., *Plant Cell* 4[10]:1295-1307, 1992). A mutation in one of the two elements abolishes or severely reduces the ability of the promoter to respond to environmental changes. The sequence of the second cis-acting element, positioned near the G-box, is not conserved among different environmentally-inducible promoters, but may be similar among promoters induced by the same signal. The spacing between the G-box and the second cis-acting element appears to be critical, suggesting a direct interaction between the respective binding factors (deVetten and Ferl, *Int. J. Biochem.* 26[9]:1055-1068, 1994; Ramachandran et al., *Curr. Opin. Genet. Dev.* 4[5]:642-646, 1994).

**Basic helix-loop-helix zipper proteins** represent an additional class of bZIP transcription factors described in the literature and includes, for example, the Myc proteins. These proteins contain two regions characteristic of transcription factors: an N-terminal transactivation domain consisting of several phosphorylation sites, and a C-terminal basic helix-loop-helix (bHLH) leucine zipper motif known to mediate dimerization and sequence specific DNA binding via three distinct domains: the leucine zipper, helix-loop-helix, and basic regions.

**The Myb family of transcription factors** is a group of functionally diverse transcriptional activators found in both plants and animals that is characterized by a conserved amino-terminal DNA-binding domain containing either two (in plant species) or three (in animal species) imperfect tandem repeats of approximately 50 amino acids (Rosinski and Atchley, *J. Mol. Evol.* 46(1):74-83, 1998; Stober-Grasser et al., *Oncogene* 7[3]:589-596, 1992). Comparisons between the amino acid sequences of representative plant and mammalian MYB proteins indicate that there is a greater conservation between

the same repeat from different proteins, than between the R2 and R3 repeats from the same protein (Martin and Paz-Ares, *Trends Genet.* 13[2]:67-73, 1997). More than 100 MYB genes have been reported from *Arabidopsis thaliana* (Romero et al., *Plant J.* 14[3]:273-284, 1998), representing the largest regulatory gene family currently known in plants. DNA-binding studies have demonstrated that there are differences, but also frequent overlaps, in binding specificity among plant MYB proteins, in line with the distinct but often related functions that are beginning to be recognized for these proteins. Studies involving the eight putative base-contacting residues in MYB DNA binding domains have revealed that at least six are fully conserved in all plant MYB proteins identified to date and the remaining two are conserved in at least 80 % of these proteins (Martin and Paz-Ares, *Trends Genet.* 13[2]:67-73, 1997). Mutational analysis involving residues that do not contact bases have indicated that the sequence-specific binding capacity of MYBs is affected and this may account for some of the differences in the DNA-binding specificity between plant MYB proteins (Solano et al., *J. Biol. Chem.* 272[5]:2889-2895, 1997). This large-sized gene family may contribute to the regulatory flexibility underlying the developmental and metabolic plasticity displayed by plants.

**Homeotic transcription factors** have, in animals, been implicated in a number of developmental processes including, for example, the control of pattern formation in insects and vertebrate embryos and the specification of cell differentiation in many tissues (Ingham, *Nature* 335:25-34, 1988; McGinnis and Krumlauf, *Cell* 68:283-302, 1992). Homeodomain secondary structures are characterized by a distinctive helix-turn-helix motif initially identified in bacterial DNA binding domains. This helix-turn-helix sequence/structure motif spans approximately 20 amino acids and is characterized by two short helices separated by a sharp 90 degree bend or turn (Harrison and Aggarwal, *Ann. Rev. Biochem.* 59:933-969, 1990). This helix has been shown to bind in the major groove of the DNA helix.

Plant homeobox genes have been identified in a number of plant species including *Arabidopsis thaliana*, maize, parsley and soybean. Expression pattern analysis of maize homeobox gene family members suggests that these transcription factors may be involved in defining specific regions in the vegetative apical meristem, potentially involved in the initiation of leaf structures (Jackson et al., *Development* 120:405-413, 1994). Such

observations imply that the plant homeobox genes, as for the animal homeobox genes, may be involved in the determination of cell fate.

**Homeodomain-zipper (HD-zip)** represents an additional family of homeodomain proteins. These homeodomain-zipper proteins (HD-zip) possess both the characteristic  
5 homeodomain linked to an additional leucine zipper dimerization motif. This family includes, for example, Athb-1 and Athb-2 (Sessa et al., *EMBO J.* 12:3507-3517, 1993) and Athb-4 (Carabelli et al., *Plant J.* 4:469-479, 1993).

**The LIM domain** is a specialized double-zinc finger motif found in a variety of proteins, in association with domains of divergent functions, such as the homeodomain  
10 (*see* the sunflower pollen-specific SF3 transcription factor: Baltz et al., *Plant J.* 2:713-721, 1992; or forming proteins composed primarily of LIM domains: Dawid et al., *Trends Genet.* 14[4]:156-162, 1998). LIM domains interact specifically with other LIM domains and with many different protein domains. LIM domains are thought to function as protein interaction modules, mediating specific contacts between members of functional  
15 complexes and modulating the activity of some of the constituent proteins. Nucleic acid binding by LIM domains, while suggested by structural considerations, remains an unproven possibility. However, it is possible that together with the homeodomain, the LIM domain could bind to the regulatory regions of developmentally controlled genes, as has been proposed for the paired box, a conserved sequence motif first identified in the  
20 paired (PRD) and gooseberry (GSB) homeodomain proteins from *Drosophila* (Triesman et al., *Genes Dev.* 5:594-604, 1991). The PRD box is also able to bind DNA in the absence of the homeodomain. LIM-domain proteins can be nuclear, cytoplasmic, or can shuttle between compartments. In the animal systems, several important LIM proteins have been shown to be associated with the cytoskeleton, having a role in adhesion-plaque and actin-microfilament organization. Among nuclear LIM proteins, the LIM  
25 homeodomain proteins form a major subfamily with important functions in cell lineage determination and pattern formation during animal development.

**The AP2 (APETALA2) and EREBPs (ethylene-responsive element binding proteins)** are the prototypic members of a family of transcription factors unique to plants,  
30 whose distinguishing characteristic is that they contain the so-called AP2 DNA-binding domain. AP2/EREBP genes form a large multigene family, and they play a variety of roles throughout the plant life cycle: from being key regulators of several developmental

processes, like floral organ identity determination or control of leaf epidermal cell identity, to forming part of the mechanisms used by plants to respond to various types of biotic and environmental stress. In *Arabidopsis thaliana*, the homeotic gene *APETALA2* (*AP2*) has been shown to control three salient processes during development: (1) the specification of flower organ identity and the regulation of floral organogenesis (Jofuku et al., *Plant Cell* 6:1211-1225, 1994); (2) establishment of flower meristem identity (Irish and Sussex, *Plant Cell* 2[8]:741-753, 1990); and (3) the temporal and spatial regulation of flower homeotic gene activity (Drews et al., *Cell* 65[6]:991-1002, 1991). DNA sequence analysis suggests that AP2 encodes a theoretical polypeptide of 432 aa, with a distinct 68 aa repeated motif termed the AP2 domain. This domain has been shown to be essential for AP2 functions and contains within the 68 aa, an eighteen amino acid core region that is predicted to form an amphipathic  $\alpha$ -helix (Jofuku et al., *Plant Cell* 6:1211-1225, 1994). AP2-like domain-containing transcription factors have been also been identified in both *Arabidopsis thaliana* (Okamuro et al., *Proc. Natl. Acad. Sci. USA* 94:7076-7081, 1997) and in tobacco with the identification of the ethylene responsive element binding proteins (EREBPs) (Ohme-Takagi and Shinshi, *Plant Cell* 7[2]:173-182, 1995). In *Arabidopsis*, these RAP2 (related to AP2) genes encode two distinct subfamilies of AP2 domain containing proteins designated AP2-like and EREBP-like (Okamuro et al., *Proc. Natl. Acad. Sci. USA* 94:7076-7081, 1997). *In vitro* DNA binding has not been shown to date using the RAP2 proteins; however, based upon the presence of two highly conserved motifs YRG and RAYD within the AP2 domain, it has been proposed that binding DNA binding occurs in a manner similar to that of AP2 proteins.

**Zinc finger domains of the type Cys<sub>2</sub>His<sub>2</sub>** appear to represent the most abundant DNA binding motif in eukaryotic transcription factors, with several thousand being identified to date (Berg and Shi, *Science* 271[5252]:1081-1085, 1996). A structural role for zinc in transcription factors was initially proposed in 1983 for the transcription factor IIIA (TFIIIA) (Hanas et al., *J Biol. Chem.* 258[23]:14120-14125, 1983). The Cys<sub>2</sub>His<sub>2</sub> Zinc finger domains are characterized by tandem arrays of sequences of C-x(2,4)-C-x(3)-[LIVMFYWC]-x(8)-H-x(3,5)-H (where X represents a variable amino acid). Structurally, the zinc finger consists of two antiparallel  $\beta$  strands followed by an  $\alpha$  helix (Lee et al., *Science* 245[4918]:635-637, 1989). This structural arrangement allows for the cysteine and histidine side chains to coordinate the zinc with the three other conserved residues

forming the hydrophobic core adjacent to the metal coordination unit (Berg and Shi, *Science* 271[5252]:1081-1085, 1996). Many proteins possessing a Cys<sub>2</sub>His<sub>2</sub> domain have been shown to interact with DNA in a sequence-specific manner. Crystal structure analysis of the mouse transcription factor Zif268 bound to a specific DNA target indicates  
 5 that the zinc fingers in the protein/DNA complex reside in the major groove of the double helix and interacts with the DNA bases through amino acid side chains referred to as the contact residues (Pavletich and Pabo, *Science* 252[5007]:809-817, 1991). The orientations of the zinc finger domains with respect to the DNA are usually identical, with each domain contacting a contiguous 3-base pair subsite, the majority of which are directed to  
 10 one strand. There are few interdomain interactions and the DNA recognition by each zinc finger appears to be largely independent of the other domains (Berg and Shi, *Science* 271[5252]:1081-1085, 1996).

**The CCAAT-box element** identified by Gelinas et al. (*Nature* 313[6000]:323-325, 1985) has been shown to occur between 80 bp and 300 bp from the transcription  
 15 start site and may operate in either orientation, with possible cooperative interactions with multiple boxes (Tasanen et al., *J Biol. Chem.* 267[16]:11513-11519, 1992); or other conserved motifs (Muro et al., *J. Biol. Chem.* 267[18]:12767-12774, 1992; Rieping and Schoffl, *Mol. Gen. Genet.* 231[2]:226-232, 1992). CCAAT-box related motifs have been identified in a number of promoters in a variety of organisms including yeast (Hahn et al.,  
 20 *Science* 240[4850]:317-321, 1988), rat (Maity et al., *Proc. Natl. Acad. Sci. USA* 87[14]:5378-5382, 1990; Vuorio et al., *J. Biol. Chem.* 265[36]:22480-22486, 1990); and plants (Rieping and Schoffl, *Mol. Gen. Genet.* 231[2]:226-232, 1992; Kehoe et al., *Plant Cell* 6[8]:1123-1134, 1994). In both yeast and vertebrates, a protein complex has been shown to bind to the CCAAT-motif. In yeast the complex consists of three proteins,  
 25 known as HAP2, HAP3 and HAP5 (Pinkham and Guarente, *Mol. Cell. Biol.* 5[12]:3410-3416, 1985).

**MADS box transcription factors** interact with a conserved region of DNA known as the MADS box. All MADS box transcription factors contain a conserved DNA-binding/dimerization region, known as the MADS domain, which has been identified  
 30 throughout the different kingdoms (Riechmann and Meyerowitz, *Biol. Chem.* 378[10]:1079-1101, 1997). Many of the MADS box genes isolated from plants are expressed primarily in floral meristems or floral organs, and are believed to play a role in



either specifying inflorescence and floral meristem identity or in determining floral organ identity. One class of regulatory genes responsible for floral meristem identity and the pattern of meristem development includes the genes *APETALA1* (*API*), *APETALA2* (*AP2*), *CAULIFLOWER* (*CAL*), *LEAFY* (*LFY*) and *AGAMOUS* (*AG*) from *Arabidopsis thaliana*. Both *LFY* and *API* have been shown to encode putative transcription factors (Weigel et al., *Cell* 69:843-859, 1992), with *API* and *AG* each encoding putative transcription factors of the MADS box domain family (Yanofsky et al., *Nature* 346:35-39, 1990). Mutations in the *Lfy* gene have been shown to result in a partial conversion of flowers into inflorescence shoots.

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### Summary of the Invention

Briefly, the present invention provides polynucleotides isolated from plants that encode transcription factors, together with polypeptides encoded by such polynucleotides. The isolated polynucleotides and polypeptides of the present invention may be usefully employed in the modification of gene expression in plants, since both tissue- and temporal-specific gene expression patterns have been shown to be governed by transcription factors during the natural development of a plant. The inventive polynucleotides and polypeptides may thus be employed in the manipulation of plant phenotypes.

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In a first aspect, the present invention provides polynucleotides isolated from eucalyptus and pine which encode transcription factors, including transcription factors from the following families of regulatory proteins: bZIP, bZIP family of G-box binding factors; basic helix-loop-helix zipper (bHLH); homeotic/homeodomain/homeobox/MADS; homeodomain zipper (ZIP); LIM domain; AP2 and EREBs; zinc finger domains of type Cys2His2; CCAAT box elements; and MYB. In one embodiment, the isolated polynucleotides of the present invention comprise a DNA sequence selected from the group consisting of: (a) sequences recited in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106; (b) complements of the sequences recited in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106; (c) reverse complements of the sequences recited in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106; (d) reverse sequences of the sequences recited in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106;

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and (e) sequences having either 40%, 60%, 75% or 90% identical nucleotides, as defined herein, to a sequence of (a) – (d).

In a further aspect, isolated polypeptides encoded by an inventive DNA sequence are provided. In specific embodiments, such polypeptides comprise an amino acid  
5 sequence selected from the group consisting of: (a) sequences provided in SEQ ID NOS: 592-1182, 1913-1930 and 2107-2278; and (b) polypeptides comprising sequences having either 60%, 75%, 90% or 95% identity, as defined herein, to a sequence of (a).

In another aspect, the present invention provides polypeptides isolated from eucalyptus and pine which comprise transcription factor DNA-binding domains. In  
10 specific embodiments, such polypeptides comprise an amino acid sequence selected from the group consisting of: (a) sequences provided in SEQ ID NOS: 2279-2293 and 2296-2368; and (b) sequences having either 60%, 75%, 90% or 95% identical residues, as defined herein, to a sequence of (a).

In yet a further aspect, the invention provides DNA constructs comprising a  
15 polynucleotide of the present invention, either alone, in combination with one or more other polynucleotides disclosed herein, or in combination with one or more known DNA sequences, together with transformed cells comprising such constructs.

In a related aspect, the present invention provides DNA constructs comprising, in the 5'-3' direction, a gene promoter sequence; an open reading frame coding for at least a  
20 functional portion of a polypeptide encoded by an inventive polynucleotide, or a variant thereof; and a gene termination sequence. The open reading frame may be orientated in either a sense or antisense direction. DNA constructs comprising an untranslated, or non-coding, region of a gene coding for a transcription factor polypeptide of the present invention or a nucleotide sequence complementary to an untranslated region, together  
25 with a gene promoter sequence and a gene termination sequence, are also provided. Preferably, the gene promoter and termination sequences are functional in a host plant. Most preferably, the gene promoter and termination sequences are those of the original genes but others generally used in the art, such as the Cauliflower Mosaic Virus (CMV) promoter, with or without enhancers such as the Kozak sequence or Omega enhancer, and  
30 *Agrobacterium tumefaciens* nopal synthase terminator may be usefully employed in the present invention. Tissue-specific promoters may be employed in order to target

expression to one or more desired tissues. The DNA construct may further include a marker for the identification of transformed cells.

In a further aspect, transgenic cells comprising the genetic constructs of the present invention are provided, together with organisms, such as plants, comprising such transgenic cells, and fruits, seeds and other products, derivatives, or progeny of such plants. Propagules of the inventive transgenic plants are included in the present invention. As used herein, the word "propagule" means any part of a plant that may be used in reproduction or propagation, sexual or asexual, including cuttings.

Plant varieties, particularly registrable plant varieties according to Plant Breeders' Rights, may be excluded from the present invention. A plant need not be considered a "plant variety" simply because it contains stably within its genome a transgene, introduced into a cell of the plant or an ancestor thereof.

In yet another aspect, methods for modifying gene expression in a target organism, such as a plant, are provided, such methods including stably incorporating into the genome of the organism a DNA construct of the present invention. In a preferred embodiment, the target organism is a plant, preferably a woody plant, more preferably selected from the group consisting of eucalyptus and pine species, and most preferably from the group consisting of *Eucalyptus grandis* and *Pinus radiata*. In a related aspect, a method for producing a target organism, such as a plant, having modified gene expression is provided, the method comprising transforming a plant cell with a DNA construct of the present invention to provide a transgenic cell and cultivating the transgenic cell under conditions conducive to regeneration and mature plant growth.

In yet a further aspect, the present invention provides methods for modifying the activity of a transcription factor in a target organism, such as a plant, comprising stably incorporating into the genome of the plant a DNA construct of the present invention. In a preferred embodiment, the target plant is a woody plant, preferably selected from the group consisting of eucalyptus and pine species, most preferably from the group consisting of *Eucalyptus grandis* and *Pinus radiata*.

The above-mentioned and additional features of the present invention and the manner of obtaining them will become apparent, and the invention will be best understood by reference to the following more detailed description. All references

disclosed herein are hereby incorporated by reference in their entirety as if each was incorporated individually.

#### Detailed Description of the Invention

5           The present invention provides isolated polynucleotides that encode plant transcription factors. As discussed above, transcription factors are components of the cellular “transcription apparatus” and are involved in the regulation of gene expression. Transcription factors are known to play a critical role in the growth and development of plants, and in cellular responses to external stimuli, such as environmental factors and  
10           disease pathogens. Transformation of plants with polynucleotides that encode proteins involved the cellular transcription process may thus be employed to modify properties such as lignin deposition, flower development, male and female sterility.

          Using the methods and materials of the present invention, the amount of a specific transcription factor may be increased or reduced by incorporating additional copies of  
15           genes or a fragments of said genes encoding the transcription factor into the genome of a target organism, such as a plant. Similarly, an increase or decrease in the amount of the transcription factor may be obtained by transforming the target plant with antisense copies of such genes.

          In one embodiment, the present invention provides isolated polynucleotides  
20           encoding, or partially encoding, plant transcription factors that are involved in the regulation of gene expression. The polynucleotides of the present invention were isolated from forestry plant sources, namely from *Eucalyptus grandis* and *Pinus radiata*, but they may alternatively be synthesized using conventional synthesis techniques. In specific embodiments, isolated polynucleotides of the present invention comprise a sequence  
25           selected from the group consisting of sequences identified as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106; complements of the sequences identified as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106; reverse complements of the sequences identified as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106; reverse sequences of the sequences identified as  
30           SEQ ID NOS: 1-591, 1183-1912 and 1931-2106; at least a specified number of contiguous residues (*x*-mers) of any of the above-mentioned polynucleotides; extended sequences corresponding to any of the above polynucleotides; antisense sequences

corresponding to any of the above polynucleotides; and variants of any of the above polynucleotides, as that term is described in this specification.

In another embodiment, the present invention provides isolated polypeptides encoded by the DNA sequences of SEQ ID NOS: 1-591, 1895-1912 and 1931-2106. In  
5 certain specific embodiments, such isolated polypeptides include a sequence selected from the group consisting of SEQ ID NOS: 592-1182, 1913-1930 and 2107-2278.

The polynucleotides and polypeptides of the present invention were putatively identified by DNA and polypeptide similarity searches. The inventive polynucleotides and polypeptides have demonstrated similarity to transformation factors that are known to  
10 be involved in regulation of transcription and/or expression in plants. The putative identities of the inventive polynucleotides are shown below in Table 1.

TABLE 1

Transcription factor family	Polynucleotide SEQ ID NO:
Basic leucine zipper (bZIP)	133, 148, 194, 206, 246, 258, 261, 265, 279, 284, 285, 286, 290, 294, 303, 318, 331, 455, 470, 473, 497, 501, 512, 533, 538, 554, 558, 575, 1896-1899, 1938, 1939, 1950, 1958, 1959, 1961, 1963, 1969, 1973, 1981, 1983, 1989, 1991, 1998, 2002, 2004, 2021, 2022, 2025, 2028, 2029, 2033-2035, 2039, 2042, 2043, 2046, 2054, 2056, 2061, 2063, 2073, 2078, 2079, 2089, 2090, 2101, 2103, 2106
bZIP family of G-box binding factors	128, 136, 141, 142, 184, 202, 222, 244, 329, 541, 545
Basic helix-loop-helix zipper	157, 179, 223, 271, 274, 305, 317, 548, 563
Myb	138, 167, 214, 221, 232, 248, 252, 254, 255, 270, 276, 278, 280, 281, 282, 283, 292, 293, 315, 319, 328, 463, 483, 485, 486, 491, 492, 494, 502, 504, 507, 508, 510, 515, 518, 519, 520, 521, 527, 534, 536, 537, 540, 553, 559, 566, 572, 588, 1905, 1906, 1931, 1932, 1934-1936, 1940, 1948, 1949, 1951, 1953-1955, 1957, 1960, 1962, 1964-1968, 1974, 1975, 1977-1979, 1982, 1984-1988, 1992, 1994-1997, 2001, 2003, 2013-2015, 2024, 2026, 2027, 2030, 2032, 2036-2038, 2041, 2044, 2045, 2047-2049, 2051, 2052, 2057-2060, 2065, 2067, 2071, 2072, 2074-2077, 2080-2088, 2104, 2105
Homeotic/homeodomain/homeobox/MADS	2, 3, 4, 7, 9, 10, 11, 12, 13, 17, 19, 25, 26, 27, 28, 29, 31, 32, 34, 35, 36, 37, 39, 40, 44, 45, 49, 50, 51, 52, 54, 55, 57, 60, 62, 63, 64, 65, 66, 69, 72, 74, 76, 77, 79, 82, 84, 88, 89, 92, 94, 96, 97, 98, 100, 102, 103, 104, 105, 106, 107, 108, 11, 112, 114, 116, 117, 123, 125, 127, 168, 185, 249, 250, 332, 333, 334, 336, 337, 338, 340, 341, 343, 344, 345, 346, 347, 348, 349, 350, 351, 353, 354, 355, 356, 357, 359, 360, 361, 362, 364, 365, 366, 367, 368, 370, 371, 372, 373, 374, 375, 376, 379, 380, 383, 384, 385, 386, 387, 389, 392, 393, 394, 398, 399, 400, 401, 402, 403, 406, 408, 409, 410, 412, 414, 416, 417,

Transcription factor family	Polynucleotide SEQ ID NO:
	418, 420, 422, 424, 425, 426, 475, 526, 529, 580, 591, 1901, 1902, 1937, 1941-1947, 1952, 1970-1972, 1976, 1980, 1990, 1993, 1999, 2000, 2006-2012, 2016-2020, 2023, 2031, 2040, 2050, 2053, 2055, 2062, 2064, 2066, 2068-2070, 2091-2100
Homeodomain zipper (HDZIP)	1, 5, 6, 14, 16, 20, 21, 22, 23, 30, 33, 41, 42, 47, 58, 59, 61, 68, 70, 71, 73, 75, 80, 86, 87, 90, 91, 93, 115, 119, 121, 126, 335, 339, 342, 352, 358, 363, 369, 377, 381, 388, 390, 396, 397, 415, 419, 421, 423, 2005, 2102
LIM domain	15, 18, 24, 43, 78, 81, 83, 198, 210, 225, 273, 378, 391, 433, 437, 450, 452
AP2 and EREBs	120, 124, 170, 171, 219, 220, 224, 226, 229, 230, 238, 242, 243, 245, 247, 256, 301, 320, 330, 432, 434, 435, 436, 445, 447, 451, 453, 454, 459, 466, 469, 476, 481, 490, 524, 546, 549, 570, 1895
Zinc finger domains of type Cys2His2	132, 146, 154, 180, 181, 182, 183, 191, 207, 227, 234, 288, 323, 324, 325, 326, 404, 535, 567, 584, 585, 586, 587, 589, 590
CCAAT box elements	155, 174, 266, 309, 431, 460, 484, 499, 542, 551, 574, 583
Other transcription factors	8, 38, 46, 48, 53, 56, 67, 85, 95, 99, 101, 109, 110, 113, 118, 122, 129, 130, 131, 134, 135, 137, 139, 140, 143, 1444, 145, 147, 149, 150, 151, 152, 153, 156, 158, 159, 160, 161, 162, 163, 164, 165, 166, 169, 172, 173, 175, 176, 177, 178, 186, 187, 188, 189, 190, 192, 193, 195, 196, 197, 199, 200, 201, 203, 204, 205, 208, 209, 211, 212, 213, 215, 216, 217, 218, 228, 231, 233, 235, 236, 237, 239, 240, 241, 251, 253, 257, 259, 260, 262, 263, 264, 267, 268, 269, 272, 275, 277, 287, 289, 291, 295, 296, 297, 298, 299, 300, 302, 304, 306, 307, 308, 310, 311, 312, 313, 314, 316, 321, 322, 327, 382, 395, 405, 407, 411, 413, 4127, 428, 429, 430, 438, 439, 440, 441, 442, 443, 444, 446, 449, 456, 457, 458, 461, 462, 464, 465, 467, 468, 471, 472, 474, 477, 478, 479, 480, 482, 487, 488, 489, 493, 495, 496, 498, 500, 505, 506, 509, 511, 513, 514, 516, 517, 522, 523, 525, 528, 530, 531,

Transcription factor family	Polynucleotide SEQ ID NO:
	532, 539, 543, 544, 547, 550, 552, 555, 556, 557, 560, 561, 562, 564, 565, 568, 569, 571, 573, 577, 578, 579, 581, 582, 448, 1183-1894, 1900, 1903, 1904, 1907, 1908-1912, 1933, 1956

The term “polynucleotide(s),” as used herein, means a single or double-stranded polymer of deoxyribonucleotide or ribonucleotide bases and includes DNA and corresponding RNA molecules, including HnRNA and mRNA molecules, both sense and anti-sense strands, and comprehends cDNA, genomic DNA and recombinant DNA, as well as wholly or partially synthesized polynucleotides. An HnRNA molecule contains introns and corresponds to a DNA molecule in a generally one-to-one manner. An mRNA molecule corresponds to an HnRNA and DNA molecule from which the introns have been excised. A polynucleotide may consist of an entire gene, or any portion thereof. Operable anti-sense polynucleotides may comprise a fragment of the corresponding polynucleotide, and the definition of “polynucleotide” therefore includes all such operable anti-sense fragments. Anti-sense polynucleotides and techniques involving anti-sense polynucleotides are well known in the art and are described, for example, in Robinson-Benion et al., “Antisense techniques,” *Methods in Enzymol.* 254[23]: 363-375, 1995; and Kawasaki et al., *Artific. Organs* 20[8]:836-848, 1996.

The definition of the terms “complement”, “reverse complement” and “reverse sequence”, as used herein, is best illustrated by the following example. For the sequence 5' AGGACC 3', the complement, reverse complement and reverse sequence are as follows:

complement	3' TCCTGG 5'
reverse complement	3' GGTCCT 5'
reverse sequence	5' CCAGGA 3'.

The term “polypeptide”, as used herein, encompasses amino acid chains of any length including full length proteins, wherein amino acid residues are linked by covalent peptide bonds. Polypeptides of the present invention may be naturally purified products, or may be produced partially or wholly using recombinant techniques. The term “polypeptide encoded by a polynucleotide” as used herein, includes polypeptides encoded



by a nucleotide sequence which includes the partial isolated DNA sequences of the present invention.

All of the polynucleotides and polypeptides described herein are isolated and purified, as those terms are commonly used in the art. Preferably, the polypeptides and polynucleotides are at least about 80% pure, more preferably at least about 90% pure, and most preferably at least about 99% pure.

Some of the polynucleotides of the present invention are "partial" sequences, in that they do not represent a full length gene encoding a full length polypeptide. Such partial sequences may be extended by analyzing and sequencing various DNA libraries using primers and/or probes and well known hybridization and/or PCR techniques. Partial sequences may be extended until an open reading frame encoding a polypeptide, a full length polynucleotide and/or gene capable of expressing a polypeptide, or another useful portion of the genome is identified. Such extended sequences, including full length polynucleotides and genes, are described as "corresponding to" a sequence identified as one of the sequences of SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, or a variant thereof, or a portion of one of the sequences of SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, or a variant thereof, when the extended polynucleotide comprises an identified sequence or its variant, or an identified contiguous portion (x-mer) of one of the sequences of SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, or a variant thereof. Such extended polynucleotides may have a length of from about 50 to about 4,000 nucleic acids or base pairs, and preferably have a length of less than about 4,000 nucleic acids or base pairs, more preferably yet a length of less than about 3,000 nucleic acids or base pairs, more preferably yet a length of less than about 2,000 nucleic acids or base pairs. Under some circumstances, extended polynucleotides of the present invention may have a length of less than about 1,800 nucleic acids or base pairs, preferably less than about 1,600 nucleic acids or base pairs, more preferably less than about 1,400 nucleic acids or base pairs, more preferably yet less than about 1,200 nucleic acids or base pairs, and most preferably less than about 1,000 nucleic acids or base pairs.

Similarly, RNA sequences, reverse sequences, complementary sequences, antisense sequences, and the like, corresponding to the polynucleotides of the present invention, may be routinely ascertained and obtained using the cDNA sequences identified as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106.

The polynucleotides identified as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106 may contain open reading frames ("ORFs") or partial open reading frames encoding polypeptides. Open reading frames may be identified using techniques that are well known in the art. These techniques include, for example, analysis for the location of  
5 known start and stop codons, most likely reading frame identification based on codon frequencies, etc. Suitable tools and software for ORF analysis are available, for example, on the Internet at <http://www.ncbi.nlm.nih.gov/gorf/gorf.html>. Open reading frames and portions of open reading frames may be identified in the polynucleotides of the present invention. Once a partial open reading frame is identified, the polynucleotide may be  
10 extended in the area of the partial open reading frame using techniques that are well known in the art until the polynucleotide for the full open reading frame is identified. Thus, open reading frames encoding polypeptides may be identified using the polynucleotides of the present invention.

Once open reading frames are identified in the polynucleotides of the present  
15 invention, the open reading frames may be isolated and/or synthesized. Expressible genetic constructs comprising the open reading frames and suitable promoters, initiators, terminators, etc., which are well known in the art, may then be constructed. Such genetic constructs may be introduced into a host cell to express the polypeptide encoded by the open reading frame. Suitable host cells may include various prokaryotic and eukaryotic  
20 cells, including plant cells, mammalian cells, bacterial cells, algae and the like.

Polypeptides encoded by the polynucleotides of the present invention may be expressed and used in various assays to determine their biological activity. Such polypeptides may be used to raise antibodies, to isolate corresponding interacting proteins or other compounds, and to quantitatively determine levels of interacting proteins or other  
25 compounds.

As used herein, the term "variant" comprehends nucleotide or amino acid sequences different from the specifically identified sequences, wherein one or more nucleotides or amino acid residues is deleted, substituted, or added. Variants may be naturally occurring allelic variants, or non-naturally occurring variants. Variant  
30 sequences (polynucleotide or polypeptide) preferably exhibit at least 50%, more preferably at least 75%, and most preferably at least 90% identical residues to a sequence of the present invention. The percentage of identical residues is determined by aligning

the two sequences to be compared as described below, determining the number of identical residues in the aligned portion, dividing that number by the total number of residues in the inventive (queried) sequence, and multiplying the result by 100.

Polynucleotide and polypeptide sequences may be aligned, and percentage of identical residues in a specified region may be determined against another polynucleotide or polypeptide sequence, using computer algorithms that are publicly available. Two exemplary algorithms for aligning and identifying the similarity of polynucleotide sequences are the BLASTN and FASTA algorithms. Polynucleotides may also be analyzed using the BLASTX algorithm, which compares the six-frame conceptual translation products of a nucleotide query sequence (both strands) against a protein sequence database. The similarity of polypeptide sequences may be examined using the BLASTP algorithm. The BLASTN, BLASTX and BLASTP programs are available on the NCBI anonymous FTP server (<ftp://ncbi.nlm.nih.gov>) under /blast/executables/. The BLASTN algorithm Version 2.0.4 [Feb-24-1998] and Version 2.0.6 [Sept-16-1998], set to the default parameters described in the documentation and distributed with the algorithm, are preferred for use in the determination of polynucleotide variants according to the present invention. The BLASTP algorithm, is preferred for use in the determination of polypeptide variants according to the present invention. The use of the BLAST family of algorithms, including BLASTN, BLASTP, and BLASTX, is described at NCBI's Internet website at the URL <http://www.ncbi.nlm.nih.gov/BLAST/newblast.html> and in the publication of Altschul, Stephen F, et al., "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs," *Nucleic Acids Res.* 25:3389-3402, 1997.

The computer algorithm FASTA is available on the Internet at the ftp site <ftp://ftp.virginia.edu/pub/fasta/>. Version 2.0u4 [February 1996], set to the default parameters described in the documentation and distributed with the algorithm, may be used in the determination of variants according to the present invention. The use of the FASTA algorithm is described in Pearson WR and Lipman DJ, "Improved tools for biological sequence analysis," *Proc. Natl. Acad. Sci. USA* 85:2444-2448, 1988; and Pearson WR, "Rapid and sensitive sequence comparison with FASTP and FASTA," *Methods in Enzymol.* 183:63-98, 1990.

The following running parameters are preferred for determination of alignments and similarities using BLASTN that contribute to the E values and percentage identity for polynucleotide sequences: Unix running command: `blastall -p blastn -d embldb -e 10 -G0 -E0 -r 1 -v 30 -b 30 -i queryseq -o results`; the parameters are: -p Program Name [String]; -d Database [String]; -e Expectation value (E) [Real]; -G Cost to open a gap (zero invokes default behavior) [Integer]; -E Cost to extend a gap (zero invokes default behavior) [Integer]; -r Reward for a nucleotide match (blastn only) [Integer]; -v Number of one-line descriptions (V) [Integer]; -b Number of alignments to show (B) [Integer]; -i Query File [File In]; and -o BLAST report Output File [File Out] Optional.

The following running parameters are preferred for determination of alignments and similarities using BLASTP that contribute to the E values and percentage identity of polypeptide sequences: `blastall -p blastp -d swissprot -e 10 -G 0 -E 0 -v 30 -b 30 -i queryseq -o results`; wherein the parameters are: -p Program Name [String]; -d Database [String]; -e Expectation value (E) [Real]; -G Cost to open a gap (zero invokes default behavior) [Integer]; -E Cost to extend a gap (zero invokes default behavior) [Integer]; -v Number of one-line descriptions (v) [Integer]; -b Number of alignments to show (b) [Integer]; -I Query File [File In]; -o BLAST report Output File [File Out] Optional.

The "hits" to one or more database sequences by a queried sequence produced by BLASTN, FASTA, BLASTP or a similar algorithm, align and identify similar portions of sequences. The hits are arranged in order of the degree of similarity and the length of sequence overlap. Hits to a database sequence generally represent an overlap over only a fraction of the sequence length of the queried sequence.

The BLASTN, FASTA and BLASTP algorithms also produce "Expect" values for alignments. The Expect value (E) indicates the number of hits one can "expect" to see over a certain number of contiguous sequences by chance when searching a database of a certain size. The Expect value is used as a significance threshold for determining whether the hit to a database, such as the preferred EMBL database, indicates true similarity. For example, an E value of 0.1 assigned to a polynucleotide hit is interpreted as meaning that in a database of the size of the EMBL database, one might expect to see 0.1 matches over the aligned portion of the sequence with a similar score simply by chance. By this criterion, the aligned and matched portions of the polynucleotide sequences then have a probability of 90% of being the same. For sequences having an E value of 0.01 or less

over aligned and matched portions, the probability of finding a match by chance in the EMBL database is 1% or less using the BLASTN or FASTA algorithm.

According to one embodiment, "variant" polynucleotides and polypeptides, with reference to each of the polynucleotides and polypeptides of the present invention, preferably comprise sequences having the same number or fewer nucleic or amino acids than each of the polynucleotides or polypeptides of the present invention and producing an E value of 0.01 or less when compared to the polynucleotide or polypeptide of the present invention. That is, a variant polynucleotide or polypeptide is any sequence that has at least a 99% probability of being the same as the polynucleotide or polypeptide of the present invention, measured as having an E value of 0.01 or less using the BLASTN, FASTA, or BLASTP algorithms set at parameters described above.

Alternatively, variant polynucleotides of the present invention hybridize to the polynucleotide sequences recited in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, or complements, reverse sequences, or reverse complements of those sequences, under stringent conditions. As used herein, "stringent conditions" refers to prewashing in a solution of 6X SSC, 0.2% SDS; hybridizing at 65°C, 6X SSC, 0.2% SDS overnight; followed by two washes of 30 minutes each in 1X SSC, 0.1% SDS at 65°C and two washes of 30 minutes each in 0.2X SSC, 0.1% SDS at 65°C.

The present invention also encompasses polynucleotides that differ from the disclosed sequences but that, as a consequence of the degeneracy of the genetic code, encode a polypeptide which is the same as that encoded by a polynucleotide of the present invention. Thus, polynucleotides comprising sequences that differ from the polynucleotide sequences recited in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106; or complements, reverse sequences, or reverse complements thereof, as a result of conservative substitutions are contemplated by and encompassed within the present invention. Additionally, polynucleotides comprising sequences that differ from the polynucleotide sequences recited in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, or complements, reverse complements or reverse sequences thereof, as a result of deletions and/or insertions totaling less than 10% of the total sequence length are also contemplated by and encompassed within the present invention. Similarly, polypeptides comprising sequences that differ from the polypeptide sequences recited in SEQ ID NOS: 592-1182, 1913-1930 and 2107-2278, as a result of amino acid substitutions, insertions, and/or

deletions totaling less than 10% of the total sequence length are contemplated by and encompassed within the present invention. In certain embodiments, variants of the inventive polypeptides possess biological activities that are the same or similar to those of the inventive polypeptides. Such variant polypeptides function as transcription factors  
5 and are thus capable of modifying gene expression in a plant. Similarly, variant polynucleotides may encode polypeptides that function as transcription factors.

Polynucleotides of the present invention also comprehend polynucleotides comprising at least a specified number of contiguous residues ( $x$ -mers) of any of the polynucleotides identified as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106,  
10 complements, reverse sequences, and reverse complements of such sequences, and their variants. Similarly, polypeptides of the present invention comprehend polypeptides comprising at least a specified number of contiguous residues ( $x$ -mers) of any of the polypeptides identified as SEQ ID NOS: 592-1182, 1913-1930 and 2107-2278, and their variants. As used herein, the term " $x$ -mer," with reference to a specific value of " $x$ ,"  
15 refers to a sequence comprising at least a specified number (" $x$ ") of contiguous residues of any of the polynucleotides identified as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, or the polypeptides identified as SEQ ID NOS: 592-1182, 1913-1930 and 2107-2278. According to preferred embodiments, the value of  $x$  is preferably at least 20, more preferably at least 40, more preferably yet at least 60, and most preferably at least 80.  
20 Thus, polynucleotides and polypeptides of the present invention comprise a 20-mer, a 40-mer, a 60-mer, an 80-mer, a 100-mer, a 120-mer, a 150-mer, a 180-mer, a 220-mer, a 250-mer, a 300-mer, a 400-mer, a 500-mer or a 600-mer of a polynucleotide or polypeptide identified as SEQ ID NOS: 1-2368, and variants thereof.

The inventive polynucleotides may be isolated by high throughput sequencing of  
25 cDNA libraries prepared from *Eucalyptus grandis* and *Pinus radiata* as described below in Examples 1 and 2. Alternatively, oligonucleotides based on the sequences provided in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106 may be prepared as detailed below and used to identify positive clones in either cDNA or genomic DNA libraries from *Eucalyptus grandis* and *Pinus radiata* by means of hybridization or PCR techniques.  
30 Hybridization and PCR techniques suitable for use with such oligonucleotides are well known in the art, and include those taught by Sambrook et al., *Ibid*. Positive clones may be analyzed by restriction enzyme digestion, DNA sequencing or the like.

The polynucleotides of the present invention may alternatively be synthesized using techniques that are well known in the art. The polynucleotides may be synthesized, for example, using automated oligonucleotide synthesizers (*e.g.*, Beckman Oligo 1000M DNA Synthesizer) to obtain polynucleotide segments of up to 50 or more nucleic acids.

5 A plurality of such polynucleotide segments may then be ligated using standard DNA manipulation techniques that are well known in the art of molecular biology. One conventional and exemplary polynucleotide synthesis technique involves synthesis of a single stranded polynucleotide segment having, for example, 80 nucleic acids, and hybridizing that segment to a synthesized complementary 85 nucleic acid segment to  
10 produce a 5 nucleotide overhang. The next segment may then be synthesized in a similar fashion, with a 5 nucleotide overhang on the opposite strand. The “sticky” ends ensure proper ligation when the two portions are hybridized. In this way, a complete polynucleotide of the present invention may be synthesized entirely *in vitro*.

In one embodiment, the DNA constructs of the present invention include an open  
15 reading frame coding for at least a functional portion of a polypeptide of the present invention or a variant thereof. As used herein, the “functional portion” of a polypeptide is that portion which contains the active site essential for regulating gene expression, *i.e.*, the portion of the molecule that is capable of binding to, or interacting with, the promoter of the gene to be expressed. The DNA-binding domain(s) for certain of the inventive  
20 polypeptides are identified below in Table 2. These DNA binding domains were identified using PROSITE 15.0 pattern or profile sequences as listed in the PROSITE database. PROSITE is available at <http://www.expasy.ch/sprot/prosite.html> and its use is described in Hofman et al., *Nucleic Acids Res.* 27:215-219, 1999; and in Bairoch, *Nucleic Acids Res.* 20:Suppl.2013-2018, 1992.

25

TABLE 2

Polynucleotide SEQ ID NO:	DNA-binding Domain(s) SEQ ID NO:
1931	2283
1934	2284, 2285
1940	2288
1949	2293
1951	2279, 2280
1953	2296, 2297
1957	2298

<b>Polynucleotide SEQ ID NO:</b>	<b>DNA-binding Domain(s) SEQ ID NO:</b>
1960	2301, 2302
1962	2307
1965	2308, 2309
1967	2281, 2282
1978	2320
1979	2321
1982	2322, 2323
1986	2324
1992	2335
1994	2336, 2337
1995	2338, 2339
1997	2340
2003	2286, 2287
2013	2289, 2290
2020	2291, 2292
2027	2299, 2300
2030	2303, 2304
2032	2305, 2306
2036	2310, 2311
2038	2312, 2313
2049	2314, 2315
2051	2316, 2317
2052	2318, 2319
2057	2325, 2326
2059	2327, 2328
2060	2329, 2330
2065	2331, 2332
2067	2333, 2334
2074	2342, 2343
2075	2344, 2345
2076	2346, 2347
2077	2348, 2349
2080	2352
2081	2353
2082	2354
2083	2355, 2356
2084	2357, 2358
2085	2359, 2360
2086	2361, 2362
2087	2365, 2366
2088	2367, 2368
2104	2350, 2351
2105	2363, 2364



The functional portion of a polypeptide may also be determined by targeted mutagenesis and screening of modified protein products with protocols well known in the art (Solano et al., *J. Biol. Chem.* 272:2889-95, 1997). The active site will generally exhibit high substrate specificity. Portions of the inventive polypeptides may be generated by synthetic or recombinant means. Synthetic polypeptides having fewer than about 100 amino acids, and generally fewer than about 50 amino acids, may be generated using techniques well known to those of ordinary skill in the art. For example, such polypeptides may be synthesized using any of the commercially available solid-phase techniques, such as the Merrifield solid-phase synthesis method, where amino acids are sequentially added to a growing amino acid chain. See Merrifield, *J. Am. Chem. Soc.* 85:2149-2154, 1963. Equipment for automated synthesis of polypeptides is commercially available from suppliers such as Perkin Elmer/Applied BioSystems, Inc. (Foster City, CA), and may be operated according to the manufacturer's instructions.

An open reading frame may be inserted in the DNA construct in a sense or antisense orientation, such that transformation of a target plant with the DNA construct will lead to a change in the amount of polypeptide compared to the wild-type plant. Transformation with a DNA construct comprising an open reading frame in a sense orientation will generally result in over-expression of the selected gene, while transformation with a DNA construct comprising an open reading frame in an antisense orientation will generally result in reduced expression of the selected gene. A population of plants transformed with a DNA construct comprising an open reading frame of the present invention in either a sense or antisense orientation may be screened for increased or reduced expression of the gene in question using techniques well known to those of skill in the art, and plants having the desired phenotypes may thus be isolated.

Alternatively, expression of a gene encoding a plant transcription factor may be inhibited by inserting a portion of an open reading frame of the present invention, in either sense or antisense orientation, in the DNA construct. Such portions need not be full-length but preferably comprise at least 25 and more preferably at least 50 residues of an inventive DNA sequence. A much longer portion or even the full length DNA corresponding to the complete open reading frame may be employed. The portion of the open reading frame does not need to be precisely the same as the endogenous sequence, provided that there is sufficient sequence similarity to achieve inhibition of the target

gene. Thus a sequence derived from one species may be used to inhibit expression of a gene in a different species.

In another embodiment, the inventive DNA constructs comprise a DNA sequence including an untranslated, or non-coding, region of a gene coding for a polypeptide of the present invention, or a DNA sequence complementary to such an untranslated region. Examples of untranslated regions which may be usefully employed in such constructs include introns and 5'-untranslated leader sequences. Transformation of a target plant with such a DNA construct may lead to a reduction in the amount of the polypeptide expressed in the plant by the process of cosuppression, in a manner similar to that discussed, for example, by Napoli et al. (*Plant Cell* 2:279-290, 1990), and de Carvalho Niebel et al. (*Plant Cell* 7:347-358, 1995).

Alternatively, regulation of polypeptide expression can be achieved by inserting appropriate sequences or subsequences (e.g. DNA or RNA) in ribozyme constructs (McIntyre and Manners, *Transgenic Res.* 5[4]:257-262, 1996). Ribozymes are synthetic RNA molecules that comprise a hybridizing region complementary to two regions, each of which comprises at least 5 contiguous nucleotides in a mRNA molecule encoded by one of the inventive polynucleotides. Ribozymes possess highly specific endonuclease activity, which autocatalytically cleaves the mRNA.

The DNA constructs of the present invention further comprise a gene promoter sequence and a gene termination sequence, operably linked to the DNA sequence to be transcribed, which control expression of the gene. The gene promoter sequence is generally positioned at the 5' end of the DNA sequence to be transcribed, and is employed to initiate transcription of the DNA sequence. Gene promoter sequences are generally found in the 5' untranslated region of a gene but they may exist downstream of the open reading frame, in introns (Luehrsen, *Mol. Gen. Genet.* 225:81-93, 1991) or in the coding region, as for example in a plant defence gene (Douglas et al., *EMBO J.* 10:1767-1775, 1991). When the construct includes an open reading frame in a sense orientation, the gene promoter sequence also initiates translation of the open reading frame. For DNA constructs comprising either an open reading frame in an antisense orientation or an untranslated region, the gene promoter sequence may consist only of a transcription initiation site having a RNA polymerase binding site.

A variety of gene promoter sequences which may be usefully employed in the DNA constructs of the present invention are well known in the art. The gene promoter sequence, and also the gene termination sequence, may be endogenous to the target plant host or may be exogenous, provided the promoter is functional in the target host. For example, the promoter and termination sequences may be from other plant species, plant viruses, bacterial plasmids and the like. Preferably, gene promoter and termination sequences are from the inventive sequences themselves.

Factors influencing the choice of promoter include the desired tissue specificity of the construct, and the timing of transcription and translation. For example, constitutive promoters, such as the 35S Cauliflower Mosaic Virus (CaMV 35S) promoter, will affect the activity of the enzyme in all parts of the plant. Use of a tissue specific promoter will result in production of the desired sense or antisense RNA only in the tissue of interest. With DNA constructs employing inducible gene promoter sequences, the rate of RNA polymerase binding and initiation can be modulated by external stimuli, such as light, heat, anaerobic stress, alteration in nutrient conditions and the like. Temporally regulated promoters can be employed to effect modulation of the rate of RNA polymerase binding and initiation at a specific time during development of a transformed cell. Preferably, the original promoters from the enzyme gene in question, or promoters from a specific tissue-targeted gene in the organism to be transformed, such as eucalyptus or pine are used. Other examples of gene promoters which may be usefully employed in the present invention include mannopine synthase (mas), octopine synthase (ocs) and those reviewed by Chua et al. (*Science* 244:174-181, 1989).

The gene termination sequence, which is located 3' to the DNA sequence to be transcribed, may come from the same gene as the gene promoter sequence or may be from a different gene. Many gene termination sequences known in the art may be usefully employed in the present invention, such as the 3' end of the *Agrobacterium tumefaciens* nopaline synthase gene. However, preferred gene terminator sequences are those from the original gene or from the target species to be transformed.

The DNA constructs of the present invention may also contain a selection marker that is effective in cells of the target organism, such as a plant, to allow for the detection of transformed cells containing the inventive construct. Such markers, which are well known in the art, typically confer resistance to one or more toxins. One example of such

a marker is the NPTII gene whose expression results in resistance to kanamycin or hygromycin, antibiotics which are usually toxic to plant cells at a moderate concentration (Rogers et al., in Weissbach, A and Weissbach H, eds., *Methods for Plant Molecular Biology*, Academic Press Inc.: San Diego, CA, 1988). Transformed cells can thus be  
5 identified by their ability to grow in media containing the antibiotic in question. Alternatively, the presence of the desired construct in transformed cells can be determined by means of other techniques well known in the art, such as Southern and Western blots.

A transcription initiation site is additionally included in the DNA construct when  
10 the sequence to be transcribed lacks such a site.

Techniques for operatively linking the components of the inventive DNA constructs are well known in the art and include the use of synthetic linkers containing one or more restriction endonuclease sites as described, for example, by Sambrook et al., (*Molecular cloning: a laboratory manual*, CSHL Press: Cold Spring Harbor, NY, 1989).  
15 The DNA construct of the present invention may be linked to a vector having at least one replication system, for example *E. coli*, whereby after each manipulation, the resulting construct can be cloned and sequenced and the correctness of the manipulation determined.

The DNA constructs of the present invention may be used to transform a variety  
20 of target organisms including, but not limited to, plants. Plants which may be transformed using the inventive constructs include both monocotyledonous angiosperms (*e.g.*, grasses, corn, grains, oat, wheat and barley); and dicotyledonous angiosperms (*e.g.*, *Arabidopsis*, tobacco, legumes, alfalfa, oaks, eucalyptus, maple); and Gymnosperms (*e.g.*, Scots pine (Aronen, *Finnish Forest Res. Papers*, Vol. 595, 1996); white spruce (Ellis et al., *Biotechnology* 11:84-89, 1993); and larch (Huang et al., *In Vitro Cell* 27:201-207, 1991). In a preferred embodiment, the inventive DNA constructs are employed to transform woody plants, herein defined as a tree or shrub whose stem lives for a number of years and increases in diameter each year by the addition of woody tissue. Preferably the target plant is selected from the group consisting of eucalyptus and pine species, most  
25 preferably from the group consisting of *Eucalyptus grandis* and *Pinus radiata*. Other species which may be usefully transformed with the DNA constructs of the present invention include, but are not limited to: pines such as *Pinus banksiana*, *Pinus brutia*,

*Pinus caribaea*, *Pinus clausa*, *Pinus contorta*, *Pinus coulteri*, *Pinus echinata*, *Pinus eldarica*, *Pinus ellioti*, *Pinus jeffreyi*, *Pinus lambertiana*, *Pinus monticola*, *Pinus nigra*, *Pinus palustris*, *Pinus pinaster*, *Pinus ponderosa*, *Pinus resinosa*, *Pinus rigida*, *Pinus serotina*, *Pinus strobus*, *Pinus sylvestris*, *Pinus taeda*, *Pinus virginiana*; other

5 gymnosperms, such as *Abies amabilis*, *Abies balsamea*, *Abies concolor*, *Abies grandis*, *Abies lasiocarpa*, *Abies magnifica*, *Abies procera*, *Chamaecyparis lawsoniana*, *Chamaecyparis nootkatensis*, *Chamaecyparis thyoides*, *Huniperus virginiana*, *Larix decidua*, *Larix laricina*, *Larix leptolepis*, *Larix occidentalis*, *Larix siberica*, *Libocedrus decurrens*, *Picea abies*, *Picea engelmanni*, *Picea glauca*, *Picea mariana*, *Picea pungens*,

10 *Picea rubens*, *Picea sitchensis*, *Pseudotsuga menziesii*, *Sequoia gigantea*, *Sequoia sempervirens*, *Taxodium distichum*, *Tsuga canadensis*, *Tsuga heterophylla*, *Tsuga mertensiana*, *Thuja occidentalis*, *Thuja plicata*; and Eucalypts, such as *Eucalyptus alba*, *Eucalyptus bancroftii*, *Eucalyptus botyroides*, *Eucalyptus bridgesiana*, *Eucalyptus calophylla*, *Eucalyptus camaldulensis*, *Eucalyptus citriodora*, *Eucalyptus cladocalyx*,

15 *Eucalyptus coccifera*, *Eucalyptus curtisii*, *Eucalyptus dalrympleana*, *Eucalyptus deglupta*, *Eucalyptus delagatensis*, *Eucalyptus diversicolor*, *Eucalyptus dunnii*, *Eucalyptus ficifolia*, *Eucalyptus globulus*, *Eucalyptus gomphocephala*, *Eucalyptus gunnii*, *Eucalyptus henryi*, *Eucalyptus laevopinea*, *Eucalyptus macarthurii*, *Eucalyptus macrorhyncha*, *Eucalyptus maculata*, *Eucalyptus marginata*, *Eucalyptus megacarpa*,

20 *Eucalyptus melliodora*, *Eucalyptus nicholii*, *Eucalyptus nitens*, *Eucalyptus nova-anglica*, *Eucalyptus obliqua*, *Eucalyptus obtusiflora*, *Eucalyptus oreades*, *Eucalyptus pauciflora*, *Eucalyptus polybractea*, *Eucalyptus regnans*, *Eucalyptus resinifera*, *Eucalyptus robusta*, *Eucalyptus rudis*, *Eucalyptus saligna*, *Eucalyptus sideroxylon*, *Eucalyptus stuartiana*, *Eucalyptus tereticornis*, *Eucalyptus torelliana*, *Eucalyptus urnigera*, *Eucalyptus urophylla*, *Eucalyptus viminalis*, *Eucalyptus viridis*, *Eucalyptus wandoo* and *Eucalyptus youmanni*; and hybrids of any of these species.

Techniques for stably incorporating DNA constructs into the genome of target plants are well known in the art and include *Agrobacterium tumefaciens* mediated introduction, electroporation, protoplast fusion, injection into reproductive organs,

30 injection into immature embryos, high velocity projectile introduction and the like. The choice of technique will depend upon the target plant to be transformed. For example, dicotyledonous plants and certain monocots and gymnosperms may be transformed by

*Agrobacterium* Ti plasmid technology, as described, for example by Bevan (*Nucleic Acids Res.* 12:8711-8721, 1984). Targets for the introduction of the DNA constructs of the present invention include tissues, such as leaf tissue, dissociated cells, protoplasts, seeds, embryos, meristematic regions; cotyledons, hypocotyls, and the like. The preferred  
5 method for transforming eucalyptus and pine is a biolistic method using pollen (*see*, for example, Aronen, in *Finnish Forest Res. Papers* 595:53, 1996) or easily regenerable embryonic tissues.

Once the cells are transformed, cells having the inventive DNA construct incorporated in their genome may be selected by means of a marker, such as the  
10 kanamycin resistance marker discussed above. Transgenic cells may then be cultured in an appropriate medium to regenerate whole plants, using techniques well known in the art. In the case of protoplasts, the cell wall is allowed to reform under appropriate osmotic conditions. In the case of seeds or embryos, an appropriate germination or callus initiation medium is employed. For explants, an appropriate regeneration medium is  
15 used. Regeneration of plants is well established for many species. For a review of regeneration of forest trees see Dunstan et al., "Somatic embryogenesis in woody plants," in Thorpe TA, ed., *In vitro embryogenesis of plants* (Current Plant Science and Biotechnology in Agriculture, 20[12]:471-540, 1995. Specific protocols for the regeneration of spruce are discussed by Roberts et al. ("Somatic embryogenesis of  
20 spruce," in Redenbaugh K, ed., *Synseed: applications of synthetic seed to crop improvement*, CRC Press: 23:427-449, 1993). Transformed plants having the desired phenotype may be selected using techniques well known in the art. The resulting transformed plants may be reproduced sexually or asexually, using methods well known in the art, to give successive generations of transgenic plants.

25 As discussed above, the production of RNA in target cells can be controlled by choice of the promoter sequence, or by selecting the number of functional copies or the site of integration of the DNA sequences incorporated into the genome of the target host. A target organism may be transformed with more than one DNA construct of the present invention, thereby modulating the activity of more than one transcription factor, for  
30 example affecting gene expression in more than one tissue, or at more than one time in the development of the target organism. Similarly, a DNA construct may be assembled containing more than one open reading frame coding for a polypeptide of the present

invention or more than one untranslated region of a gene coding for such a polypeptide. The polynucleotides of the present invention may also be employed in combination with other known sequences encoding transcription factors.

The isolated polynucleotides of the present invention also have utility in genome mapping, in physical mapping, and in positional cloning of genes. As detailed below, the polynucleotide sequences identified as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, and their variants, may be used to design oligonucleotide probes and primers. Oligonucleotide probes designed using the polynucleotides of the present invention may be used to detect the presence and examine the expression patterns of genes in any organism having sufficiently similar DNA and RNA sequences in their cells using techniques that are well known in the art, such as slot blot DNA hybridization techniques. Oligonucleotide primers designed using the polynucleotides of the present invention may be used for PCR amplifications. Oligonucleotide probes and primers designed using the polynucleotides of the present invention may also be used in connection with various microarray technologies, including the microarray technology of Synteni (Palo Alto, California).

As used herein, the term "oligonucleotide" refers to a relatively short segment of a polynucleotide sequence, generally comprising between 6 and 60 nucleotides, and comprehends both probes for use in hybridization assays and primers for use in the amplification of DNA by polymerase chain reaction.

An oligonucleotide probe or primer is described as "corresponding to" a polynucleotide of the present invention, including one of the sequences set out as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, or a variant thereof, if the oligonucleotide probe or primer, or its complement, is contained within one of the sequences set out as SEQ ID NOS: 1-591, 1183-1912 and 1931-2106, or a variant of one of the specified sequences. Oligonucleotide probes and primers of the present invention are substantially complementary to a polynucleotide disclosed herein.

Two single stranded sequences are said to be substantially complementary when the nucleotides of one strand, optimally aligned and compared, with the appropriate nucleotide insertions and/or deletions, pair with at least 80%, preferably at least 90% to 95% and more preferably at least 98% to 100% of the nucleotides of the other strand. Alternatively, substantial complementarity exists when a first DNA strand will selectively

hybridize to a second DNA strand under stringent hybridization conditions. Stringent hybridization conditions for determining complementarity include salt conditions of less than about 1 M, more usually less than about 500 mM, and preferably less than about 200 mM. Hybridization temperatures can be as low as 5°C, but are generally greater than about 22°C, more preferably greater than about 30°C, and most preferably greater than about 37°C. Longer DNA fragments may require higher hybridization temperatures for specific hybridization. Since the stringency of hybridization may be affected by other factors such as probe composition, presence of organic solvents and extent of base mismatching, the combination of parameters is more important than the absolute measure of any one alone.

In specific embodiments, the oligonucleotide probes and/or primers comprise at least about 6 contiguous residues, more preferably at least about 10 contiguous residues, and most preferably at least about 20 contiguous residues complementary to a polynucleotide sequence of the present invention. Probes and primers of the present invention may be from about 8 to 100 base pairs in length or, preferably from about 10 to 50 base pairs in length or, more preferably from about 15 to 40 base pairs in length. The probes can be easily selected using procedures well known in the art, taking into account DNA-DNA hybridization stringencies, annealing and melting temperatures, and potential for formation of loops and other factors, which are well known in the art. Tools and software suitable for designing probes, and especially suitable for designing PCR primers, are available on the Internet, for example, at URL <http://www.horizonpress.com/pcr/>. Preferred techniques for designing PCR primers are also disclosed in Dieffenbach and Dykster, *PCR primer: a laboratory manual*, CSHL Press: Cold Spring Harbor, NY, 1995.

A plurality of oligonucleotide probes or primers corresponding to a polynucleotide of the present invention may be provided in a kit form. Such kits generally comprise multiple DNA or oligonucleotide probes, each probe being specific for a polynucleotide sequence. Kits of the present invention may comprise one or more probes or primers corresponding to a polynucleotide of the present invention, including a polynucleotide sequence identified in SEQ ID NOS: 1-591, 1183-1912 and 1931-2106.

In one embodiment useful for high-throughput assays, the oligonucleotide probe kits of the present invention comprise multiple probes in an array format, wherein each probe is immobilized at a predefined, spatially addressable location on the surface of a



solid substrate. Array formats which may be usefully employed in the present invention are disclosed, for example, in U.S. Patents Nos. 5,412,087 and 5,545,451; and PCT Publication No. WO 95/00450, the disclosures of which are hereby incorporated by reference.

5           The polynucleotides of the present invention may also be used to tag or identify an organism or reproductive material therefrom. Such tagging may be accomplished, for example, by stably introducing a non-disruptive non-functional heterologous polynucleotide identifier into an organism, the polynucleotide comprising one of the polynucleotides of the present invention.

10           The following examples are offered by way of illustration and not by way of limitation.

#### EXAMPLE 1

##### Isolation and Characterization of cDNA Clones from *Eucalyptus grandis*

15

Nine *Eucalyptus grandis* cDNA expression libraries (prepared from either mature shoot buds, early wood phloem, floral tissue, leaf tissue (two independent libraries), feeder roots, structural roots, xylem or early wood xylem) were constructed and screened as follows.

20

Total RNA was extracted from the plant tissue using the protocol of Chang et al. (*Plant Molecular Biology Reporter* 11:113-116, 1993). mRNA was isolated from the total RNA preparation using either a Poly(A) Quik mRNA Isolation Kit (Stratagene, La Jolla, CA) or Dynal Beads Oligo (dT)<sub>25</sub> (Dynal, Skogen, Norway). A cDNA expression library was constructed from the purified mRNA by reverse transcriptase synthesis followed by insertion of the resulting cDNA clones in Lambda ZAP using a ZAP Express cDNA Synthesis Kit (Stratagene), according to the manufacturer's protocol. The resulting cDNAs were packaged using a Gigapack II Packaging Extract (Stratagene) using an aliquot (1 – 5 µl) from the 5 µl ligation reaction dependent upon the library. Mass excision of the library was done using XL1-Blue MRF' cells and XL0LR cells  
25           followed by insertion of the resulting cDNA clones in Lambda ZAP using a ZAP Express cDNA Synthesis Kit (Stratagene), according to the manufacturer's protocol. The resulting cDNAs were packaged using a Gigapack II Packaging Extract (Stratagene) using an aliquot (1 – 5 µl) from the 5 µl ligation reaction dependent upon the library. Mass excision of the library was done using XL1-Blue MRF' cells and XL0LR cells  
30           (Stratagene) with ExAssist helper phage (Stratagene). The excised phagemids were diluted with NZY broth (Gibco BRL, Gaithersburg, MD) and plated out onto LB-kanamycin agar plates containing X-gal and isopropylthio-beta-galactoside (IPTG).

Of the colonies plated and picked for DNA miniprep, 99% contained an insert suitable for sequencing. Positive colonies were cultured in NZY broth with kanamycin and cDNA was purified by means of alkaline lysis and polyethylene glycol (PEG) precipitation. Agarose gel at 1% was used to screen sequencing templates for chromosomal contamination. Dye primer sequences were prepared using a Turbo Catalyst 800 machine (Perkin Elmer/Applied Biosystems Division, Foster City, CA) according to the manufacturer's protocol.

DNA sequence for positive clones was obtained using a Perkin Elmer/Applied Biosystems Division Prism 377 sequencer. cDNA clones were sequenced first from the 5' end and, in some cases, also from the 3' end. For some clones, internal sequence was obtained using either Exonuclease III deletion analysis, yielding a library of differentially sized subclones in pBK-CMV, or by direct sequencing using gene-specific primers designed to identified regions of the gene of interest.

The determined cDNA sequences were compared to known sequences in the EMBL database (up to mid-July 1999) using the computer algorithms FASTA and/or BLASTN. Multiple alignments of redundant sequences were used to build up reliable consensus sequences. The determined cDNA sequences are provided in SEQ ID NOS: 1-331, 1183-1536, 1896-1901, 1905, 1906, 1908-1910, 1932-1968, 2001-2036, 2074-2079 and 2104. Based on similarity to known sequences from other plant species, the isolated DNA sequences were identified as encoding transcription factors, as detailed in Table 1 above. The predicted amino acid sequences corresponding to the DNA sequences of SEQ ID NOS: 1-331, 1896-1901, 1905, 1906, 1908, 1909, 1910, 1932-1968, 2001-2036, 2074-2079 and 2104 are provided in SEQ ID NOS: 592-922, 1914-1919, 1923, 1924, 1926-1928, 2108-2142, 2175-2210, 2247-2252 and 2276, respectively.

## EXAMPLE 2

### Isolation and Characterization of cDNA Clones from *Pinus radiata*

Fourteen *Pinus radiata* cDNA expression libraries (prepared from either shoot bud tissue, suspension cultured cells, early wood phloem (two independent libraries), fascicle meristem tissue, male strobilus, root (unknown lineage), feeder roots, structural

roots, female strobilus, cone primordia, female receptive cones and xylem (two independent libraries)) were constructed and screened as described above in Example 1.

DNA sequence for positive clones was obtained using forward and reverse primers on a Perkin Elmer/Applied Biosystems Division Prism 377 sequencer and the determined sequences were compared to known sequences in the database as described above.

Based on similarity to known sequences from other plant species, the isolated DNA sequences (SEQ ID NOS: 332-591, 1537-1894, 1895, 1902-1904, 1907, 1911, 1912, 1931, 1969-2000, 2037-2073, 2080-2103, 2105 and 2106) were identified as encoding transcription factors as detailed above in Table 1. The predicted amino acid sequences corresponding to the DNA sequences of SEQ ID NOS: 332-591, 1895, 1902-1904, 1907, 1911, 1912, 1931, 1969-2000, 2037-2073, 2080-2103, 2105 and 2106 are provided in SEQ ID NOS: 923-1182, 1913, 1920-1922, 1925, 1929-1930, 2107, 2143-2174, 2211-2246, 2253-2275, 2277 and 2278, respectively.

### EXAMPLE 3

#### Use of a Myb Transcription Factor Gene to Modify Gene Expression in Plants

Transformation of tobacco plants with a *Eucalyptus grandis* Myb transcription factor gene is performed as follows. DNA constructs comprising sense and anti-sense constructs containing a DNA sequence including the coding region of the Myb transcription factor of SEQ ID NO: 2076 are constructed and inserted into *Agrobacterium tumefaciens* by direct transformation using published methods (see An G, Ebert PR, Mitra A, Ha SB, "Binary vectors," in Gelvin SB and Schilperoort RA, eds., *Plant Molecular Biology Manual*, Kluwer Academic Publishers: Dordrecht, 1988). The constructs of sense DNAs are made by direct cloning from PBK-CMV plasmid by cloning cDNA insert into pART7 plasmid, which is then cut by NotI enzyme and 35S-Insert-OCS 3'UTR put into pART27 plant expression vector (see Gleave, *Plant Molecular Biology* 20:1203-1207, 1992). The presence and integrity of the transgenic constructs are verified by restriction digestion and DNA sequencing.

Tobacco (*Nicotiana tabacum* cv. Samsun) leaf sections are transformed with the sense and anti-sense constructs using the method of Horsch et al. (*Science* 227:1229-

1231, 1985). *Arabidopsis thaliana* (ecotype: Columbia) whole plants are transformed with the sense and anti-sense constructs using either the vacuum infiltration (Bechtold et al., *C.R. Acad.* 316:1194-1199, 1992), or floral dip (Clough and Bent, *The Plant Journal* 16:735-743, 1998) procedures. Transformed plants containing the appropriate construct  
5 are verified using Southern blot experiments. Expression of the *Eucalyptus* Myb transcription factor gene in transformed plants is confirmed by isolating total RNA from each independent transformed plant line created with the Myb transcription factor gene sense and anti-sense constructs. The RNA samples are analysed in Northern blot experiments to determine the level of expression of the transgene in each transformed  
10 line. The expression level of the Myb transcription factor, encoded by the *Eucalyptus* Myb transcription factor gene and by the endogenous Myb transcription factor gene, for each transformed plant line created with the sense and anti-sense constructs is compared to that of wild-type control plants.

15        Although the present invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, changes and modifications can be carried out without departing from the scope of the invention which is intended to be limited only by the scope of the claims.

Claims:

1. An isolated polynucleotide comprising a sequence selected from the group consisting of sequences provided in SEQ ID NO: 1-591, 1183-1912 and 1931-2106.
2. An isolated polynucleotide comprising a sequence selected from the group consisting of:
  - (a) complements of the sequence recited in SEQ ID NO: 1-591, 1183-1912 and 1931-2106;
  - (b) reverse complements of the sequence recited in SEQ ID NO: 1-591, 1183-1912 and 1931-2106; and
  - (c) reverse sequences of the sequences recited in SEQ ID NO: 1-591, 1183-1912 and 1931-2106.
3. An isolated polynucleotide comprising a sequence having at least 40% identical nucleotides to a sequence provided in SEQ ID NO: 1-8, 10, 11, 14-16, 21-23, 25, 26, 28, 29, 32-38, 41-67, 69-92, 95, 97-100, 102-105, 107-118, 120, 122, 124-130, 133-136, 138, 139, 141-148, 150-154, 156-164, 166, 167, 169-174, 176-217, 219-225, 227-232, 234-239, 241-245, 247-251, 253-267, 269-279, 281, 284-338, 341, 343-346, 348-351, 353, 356-359, 362, 365-367, 370-372, 375-378, 381-385, 387-393, 395-397, 399-404, 406, 407, 409-413, 415, 417-419, 421-436, 438-441, 443-452, 454, 455, 457-459, 461-468, 470-478, 480-487, 489-498, 500, 501, 503, 504, 506-516, 519-524, 527-538, 540-542, 544-579, 581-591, 1895-1902, 1904-1912, 1931-1934, 1938-1941, 1943-1956, 1958-1960, 1962-1964, 1966, 1967, 1969, 1972-1978, 1980, 1981, 1983-1998, 2000-2006, 2008-2010, 2013-2015, 2018, 2020-2038, 2041-2056, 2058-2063, 2065-2069, 2072-2086, 2088-2091, 2096-2098, 2100 and 2102-2105 as determined using the computer algorithm BLASTN.
4. An isolated polynucleotide comprising a sequence having at least 60% identical nucleotides to a sequence provided in SEQ ID NO: 1-16, 18-26, 28-38, 41-92, 95-118, 120, 122-164, 166, 167, 169-174, 176-217, 219-232, 234-281, 283-338, 341, 343-346, 348-353, 356-359, 362, 365-367, 369-372, 375-379, 381-385, 387-397, 399-407, 409-413, 415, 417-419, 421-436, 438-455, 457-468, 470-478, 480-501, 503, 504, 506-525, 527-538, 540-542, 544-579, 581-591, 1895-1902, 1904-1912, 1931-1941, 1943-1969, 1972-1981, 1983-1998, 2000-2010, 2013-2018, 2020-

- 2039, 2041-2056, 2058-2063, 2065-2069, 2072-2091, 2096-2098, 2100 and 2102-2015 as determined using the computer algorithm BLASTN.
5. An isolated polynucleotide comprising a sequence having at least 75% identical nucleotides to a sequence provided in SEQ ID NO: 1-16, 18-38, 41-164, 166-167, 169-339, 341, 343-346, 348-353, 356-359, 362-363, 365-372, 375-385, 387-407, 409-415, 417-419, 421-455, 457-468, 470-501, 503-504, 506-525, 527-538, 540-579, 581-591, 1895-1902, 1904-1912, 1931-1970, 1972-2010, 2013-2018, 2020-2063, 2065-2069, 2071-2091, 2095-2098 and 2100-2105 as determined using the computer algorithm BLASTN.
  6. An isolated polynucleotide comprising a sequence having at least 90% identical nucleotides to a sequence provided in SEQ ID NO: 1-38, 41-164, 166-167, 169-346, 348-353, 355-359, 362-372, 374-407, 409-415, 417-455, 457-468, 470-501, 503-525, 527-538, 540-579, 581-591, 1895-1902, 1904-1912, 1931-2010, 2013-2018, 2020-2063, 2065-2069, 2071-2091, 2093 and 2095-2106 as determined using the computer algorithm BLASTN.
  7. An isolated polypeptide encoded by a polynucleotide according to any one of claims 1-6.
  8. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO: 592, 594-850, 852-930, 932-951, 953-1046, 1048-1182, 1913-1930, 2107-2293 and 2296-2368.
  9. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:
    - (a) sequences having at least 60% identical residues to a sequence of SEQ ID NO: 592, 597, 599, 602, 605, 607, 610, 612, 613, 616, 624, 626-628, 630-635, 637, 639-641, 644, 646, 648, 649, 652, 653, 655, 656, 658, 663, 665, 666, 668, 670, 673, 675, 676, 678-680, 683, 700, 702-705, 708, 709, 711, 713-715, 717-721, 726, 728, 730, 732, 735, 737, 739, 742-745, 747, 749, 750, 752-754, 757, 760, 761, 763-765, 768-776, 778, 780, 782, 783, 785-787, 790, 793-796, 798, 804, 807-811, 818, 820, 823, 825, 827, 829, 832-836, 838-844, 846-848, 850, 852, 854-857, 860, 866-868, 870, 875, 876, 878-881, 886, 887, 891, 894-899, 901, 903-907, 909-911, 913, 914, 916, 917, 920-922, 924, 927-929, 934-937, 939, 941, 943, 944, 946, 948-950,

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- (b) sequences having at least 75% identical residues to a sequence of SEQ ID NO: 592, 594, 595, 597, 599, 601, 602, 604, 605, 607, 609-613, 615, 616, 619, 624, 626-628, 630-641, 644-649, 651-653, 655-659, 661-663, 665-668, 670, 672-676, 678-681, 683, 686, 688-691, 696, 698-700, 702-705, 707-709, 711, 713-715, 717-722, 724, 726-730, 732-740, 742-755, 757, 758, 760-765, 767-778, 780-788, 790, 792-799, 802, 804, 805, 807-811, 814-821, 823, 825-827, 829, 831-844, 846-850, 852-857, 860, 862, 863, 865-871, 874-881, 883-887, 890-922, 924, 925, 927-930, 933-937, 939, 941-944, 946-950, 953, 954, 957, 958, 960, 962, 963, 966-970, 972-976, 978-980, 983, 984, 986-989, 991-998, 1000, 1002-1010, 1012-1023, 1025-1028, 1030-1036, 1038-1046, 1048-1056, 1059-1077, 1079-1081, 1083, 1084, 1087-1092, 1094-1098, 1100-1105, 1107, 1110, 1113-1115, 1117, 1120-1122, 1124-1154, 1156-1181, 1913-1920, 1922-1926, 1928-1930, 2279, 2280, 2283, 2287, 2289, 2294, 2295, 2298, 2304, 2306, 2307, 2318, 2320, 2330, 2335-2337, 2340 or 2341;
- (c) sequences having at least 90% identical residues to a sequence of SEQ ID NO: 592, 594-616, 618-621, 623-683, 686-692, 696, 698-715, 717-755, 757, 758, 760-800, 802-850, 852-872, 874-930, 932-937, 939, 941-944, 946-950, 953-963, 966-998, 1000-1046, 1048-1085, 1087-1092, 1094-1105, 1107-1181, 1913-1920, 1922-1930, 2279-2280, 2283-2287, 2289-2292, 2296-2299, 2303-2309, 2311-2316, 2318, 2320, 2321, 2329-2346, 2348, 2349 or 2353; and
- (d) sequences having at least 95% identical residues to a sequence of SEQ ID NO: 592, 594-616, 618-684, 686-693, 696-755, 757, 758, 760-850, 852-

930, 932-937, 939-944, 946-951, 953-963, 965-1046, 1048-1182, 1913-1920, 1922-1930, 2279-2281, 2283-2292, 2296-2309, 2311-2322, 2324, 2325, 2329-2346, 2348, 2349 or 2351-2368.

10. An isolated polynucleotide that encodes a polypeptide according to any one of claims 8 and 9.
11. A DNA construct comprising a polynucleotide according to any one of claims 1-6 and 10.
12. A transgenic cell comprising a DNA construct according to claim 11.
13. A DNA construct comprising, in the 5'-3' direction:
  - (a) a gene promoter sequence,
  - (b) an open reading frame coding for at least a functional portion of a polypeptide of any one of claims 7-9; and
  - (c) a gene termination sequence.
14. The DNA construct of claim 13 wherein the open reading frame is in a sense orientation.
15. The DNA construct of claim 13 wherein the open reading frame is in an antisense orientation.
16. The DNA construct of claim 13 wherein the gene promoter sequence and gene termination sequences are functional in a plant host.
17. The DNA construct of claim 13 further comprising a marker for identification of transformed cells.
18. A DNA construct comprising, in the 5'-3' direction:
  - (a) a gene promoter sequence,
  - (b) an untranslated region of an isolated polynucleotide of any one of claims 1-6 and 10; and
  - (c) a gene termination sequence.
19. The DNA construct of claim 18 wherein the untranslated region is in a sense orientation.
20. The DNA construct of claim 18 wherein the untranslated region is in an antisense orientation.
21. The DNA construct of claim 18 wherein the gene promoter sequence and gene termination sequences are functional in a plant host.



22. A transgenic plant cell comprising a DNA construct of any one of claims 13-21.
23. A plant comprising a transgenic plant cell according to claim 22, or fruit or seeds thereof.
24. The plant of claim 23 wherein the plant is a woody plant.
25. The plant of claim 24 wherein the plant is selected from the group consisting of eucalyptus, pine, acacia, poplar, sweetgum, teak and mahogany species
26. A method for modifying gene expression in a plant comprising stably incorporating into the genome of the plant a DNA construct according to any one of claims 13-21.
27. The method of claim 26, wherein the plant is a woody plant.
28. The method of claim 27, wherein the plant is selected from the group consisting of eucalyptus, pine, acacia, poplar, sweetgum, teak and mahogany species.
29. A method for producing a plant having modified gene expression comprising:
  - (a) transforming a plant cell with a DNA construct according to any one of claims 13-21 to provide a transgenic cell; and
  - (b) cultivating the transgenic cell under conditions conducive to regeneration and mature plant growth.
30. The method of claim 29 wherein the plant is a woody plant.
31. The method of claim 30 wherein the plant is selected from the group consisting of eucalyptus, pine, acacia, poplar, sweetgum, teak and mahogany species.
32. A method for modifying the activity of a polypeptide in a plant comprising stably incorporating into the genome of the plant a DNA construct according to any one of claims 13-21.
33. The method of claim 32 wherein the plant is a woody plant.
34. The method of claim 33 wherein the plant is selected from the group consisting of eucalyptus, pine, acacia, poplar, sweetgum, teak and mahogany species.
35. An isolated polypeptide comprising a DNA-binding domain, wherein the DNA-binding domain comprises an amino acid sequence selected from the group consisting of SEQ ID NO: 2279-2293 and 2296-2368.

## SEQUENCE LISTING

<110> Wood, Marion  
Shenk, Michael A.  
McGrath, Annette  
Glenn, Matthew

<120> Compositions and methods for the  
modification of plant gene transcription.

<130> 11000.1021C1PCT

<160> 2368

<170> FastSEQ for Windows Version 3.0

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&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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&lt;400&gt; 19

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&lt;210&gt; 20

&lt;211&gt; 48

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 20

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&lt;210&gt; 21

&lt;211&gt; 766

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 21

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&lt;211&gt; 329

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 22

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&lt;211&gt; 954

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 23

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&lt;210&gt; 24

&lt;211&gt; 338

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 24

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&lt;210&gt; 25

&lt;211&gt; 338

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 25

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&lt;210&gt; 26

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 26

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&lt;210&gt; 27

&lt;211&gt; 188

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 27

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&lt;210&gt; 28

&lt;211&gt; 261

&lt;212&gt; DNA



&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 28

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&lt;210&gt; 29

&lt;211&gt; 298

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 29

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&lt;211&gt; 218

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 30

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&lt;210&gt; 31

&lt;211&gt; 240

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 31

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&lt;210&gt; 32

&lt;211&gt; 1223

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 32

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&lt;211&gt; 2148

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 33

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&lt;210&gt; 34

&lt;211&gt; 273

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 34

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&lt;210&gt; 35

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&lt;212&gt; DNA

<213> *Eucalyptus grandis*

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&lt;211&gt; 238

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

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&lt;210&gt; 37

&lt;211&gt; 698

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 37

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&lt;210&gt; 38

&lt;211&gt; 277

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 38

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cttgatggaa	gtacccaggt	gacggacaga	caaagcatag	ttgacacttt	caataatgat	180
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&lt;210&gt; 39

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 <212> DNA  
 <213> Eucalyptus grandis

<400> 39  
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 aatctgagca atgaactaga taggggtcaaa aaggagaacg acaacttgca gattcagctc 120  
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<210> 40  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 40  
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 gctccacgaa gcaaacagga ccttgaatca acgggttgatg gaaggatacc aagtgaatgc 180  
 gctccagtta aatcaacatg ccgaggaagt cggaggatac ggtcatccac cgccgccgcc 240  
 actgccgcca cagccacttg ctccagctca cagcgaagct tttttcatcc cttggaatgt 300  
 gaaccactt tgcaaatggg ataccagccc gatccagtgt c 341

<210> 41  
 <211> 1286  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 41  
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 agaaatggcg atgacgatgg tgcctcacag ggagagcagc agtggaagca tcaacaagca 180  
 cttgaccgac tcggcaagta cgtgaggtac acagcggagc aagtgaagc tctcgagagg 240  
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<210> 42  
 <211> 338  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 42  
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 tctgagtctt ggccctcgaga cgcccttcaa gatcgaagcc cagaggcaag ccaaacagcg 180

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<210> 43  
 <211> 219  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 43						
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aagagtgaca	catcatcggt	ggtcctgggtc	ggaggtcaaa	tatctctctg	attgccatct	180
gatggcacta	gatgctagcc	tttagagttg	tgtatcggga			219

<210> 44  
 <211> 310  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 44						
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gcattagatt						310

<210> 45  
 <211> 1043  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 45						
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gttgccgagg	atcgacgctc	agctggctca	gtcgacgcat	gtggtggcca	agtactcggc	780
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<210> 46  
 <211> 391  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 46						
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aaccgtggcc	ctggggactt	ttcgggcgct	g			391

&lt;210&gt; 47

&lt;211&gt; 821

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 47

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cgtccaagcc	gaaatagcca	cgctagggaa	ccagggtccat	gtaacgcttc	gtaatcaatt	180
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&lt;210&gt; 48

&lt;211&gt; 648

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 48

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acagaacccat	actaccatat	ttttttcctc	attccggcat	tggtgtcaga	gcgctgcatg	600
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&lt;210&gt; 49

&lt;211&gt; 559

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 49

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<210> 50  
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 ctgctggagg agctttgcga agctggccgc gcaatttgta ccgagaaaat gacggatgat 180  
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<210> 51  
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<400> 51  
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<210> 52  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 52  
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<210> 53  
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 <212> DNA  
 <213> Eucalyptus grandis

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&lt;210&gt; 54

&lt;211&gt; 944

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 54

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gagtcgcggc	agcggctcgtc	ggtggcttcg	gcggacgggt	cgaaggaccc	ggagctggat	900
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&lt;210&gt; 55

&lt;211&gt; 915

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 55

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ctccatcacc	aaaacaggca	tccgctggcc	aaagcaagag	acacagggca	ttaaattgagg	900
tcgatgctga	caaag					915

&lt;210&gt; 56

&lt;211&gt; 498

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 56

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&lt;210&gt; 57

&lt;211&gt; 474

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 57

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gcagctatcc	caaagattcg	gacaaacaca	tgctcgcaaa	acaagcggga	ctaaccagga	180
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&lt;210&gt; 58

&lt;211&gt; 489

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 58

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aaaaaaaa						489

&lt;210&gt; 59

&lt;211&gt; 456

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 59

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&lt;210&gt; 60

&lt;211&gt; 455

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 60

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&lt;210&gt; 61

&lt;211&gt; 406

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 61

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aatcgatttt	cagctatcct	gaggatcttt	acaacgagga	atattatgat	gaccaggcgc	360
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&lt;210&gt; 62

&lt;211&gt; 530

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 62

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&lt;210&gt; 63

&lt;211&gt; 452

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 63

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&lt;210&gt; 64

&lt;211&gt; 354

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 64

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gagcggagaa	gagcttgatc	ccttgagtct	gagagagctg	cagtatttgg	agca	354

&lt;210&gt; 65

&lt;211&gt; 1239

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 65

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&lt;210&gt; 66

&lt;211&gt; 371

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 66

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&lt;210&gt; 67

&lt;211&gt; 387

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 67

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&lt;210&gt; 68

&lt;211&gt; 479

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 68

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&lt;210&gt; 69

&lt;211&gt; 684

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 69

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&lt;210&gt; 70

&lt;211&gt; 356

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 70

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&lt;210&gt; 71

&lt;211&gt; 725

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 71

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agagc						725

&lt;210&gt; 72

&lt;211&gt; 523

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 72

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&lt;210&gt; 73

&lt;211&gt; 646

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 73

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&lt;210&gt; 74

&lt;211&gt; 471

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 74

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&lt;210&gt; 75

&lt;211&gt; 766

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 75

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&lt;210&gt; 76

&lt;211&gt; 443

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 76

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&lt;210&gt; 77

&lt;211&gt; 529

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 77

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 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 78

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<400> 79

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<400> 81

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&lt;210&gt; 82

&lt;211&gt; 493

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 82

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&lt;210&gt; 83

&lt;211&gt; 764

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 83

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&lt;210&gt; 84

&lt;211&gt; 490

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 84

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 <212> DNA  
 <213> Eucalyptus grandis

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&lt;210&gt; 90

&lt;211&gt; 744

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 90

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&lt;210&gt; 91

&lt;211&gt; 509

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 91

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&lt;211&gt; 363

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 92

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&lt;211&gt; 110

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 93

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&lt;210&gt; 94

&lt;211&gt; 440

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 94

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&lt;210&gt; 95

&lt;211&gt; 413

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 95

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&lt;210&gt; 96

&lt;211&gt; 706

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 96

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&lt;210&gt; 97

&lt;211&gt; 396

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 97

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&lt;210&gt; 98

&lt;211&gt; 379

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 98

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&lt;210&gt; 99

&lt;211&gt; 421

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 99

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&lt;210&gt; 100

&lt;211&gt; 460

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 100

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&lt;210&gt; 101

&lt;211&gt; 423

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 101

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 <212> DNA  
 <213> Eucalyptus grandis

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aga						483

&lt;210&gt; 106

&lt;211&gt; 404

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 106

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&lt;210&gt; 107

&lt;211&gt; 527

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 107

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&lt;210&gt; 108

&lt;211&gt; 482

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 108

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&lt;210&gt; 109

&lt;211&gt; 343

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 109

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&lt;210&gt; 110

&lt;211&gt; 617

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 110

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&lt;210&gt; 111

&lt;211&gt; 380

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 111

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&lt;210&gt; 112

&lt;211&gt; 348

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 112

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&lt;210&gt; 113

&lt;211&gt; 350

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 113

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350

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<211> 534

<212> DNA

<213> Eucalyptus grandis

<400> 114

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<211> 450

<212> DNA

<213> Eucalyptus grandis

<400> 115

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<212> DNA

<213> Eucalyptus grandis

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<211> 372

<212> DNA

<213> Eucalyptus grandis

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372

&lt;210&gt; 118

&lt;211&gt; 378

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 118

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gccctcgtgg	ccgtcgaccc	ggccgggtgt	ctccggtatg	atcgcgaggg	gaggacgcct	360
ctgcacttgg	ccgccatc					378

&lt;210&gt; 119

&lt;211&gt; 414

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 119

cgacgacctc	gacaacgaga	gggcgtcctc	ccgcggcggc	ggcagcgacg	aggaggacgg	60
cgacatgtcg	aggaagaagc	tccggctgtc	gaaggaccag	tccgccgtcc	tcgaggagag	120
cttcaaagag	cacaacaccc	tcaatcctaa	gcaaaagctg	gcaactggcg	agcagctggg	180
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ccggcggtcg	cagaaggagg	tgcaggagct	gcggggcgctc	aagctctccc	cgcagttcta	360
catgcacctt	ttcccttcca	ccacccttac	catgtgcccc	ttctgtgagc	gcgt	414

&lt;210&gt; 120

&lt;211&gt; 313

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 120

gccgattacg	acgagggcgg	cgacgacaat	ccggggagcc	gccacccggg	gacccggcag	60
ttcttcccgg	tggaggagga	ggaggagctg	gaagaggatg	gcgagcgggc	aggaatgggg	120
ggagccgcag	tgcgcggcgg	gttcccagag	gcgcactggg	tcggagtcag	gttccgcccag	180
tcggatcacc	atccaatcgg	atcgggcaag	ggctcaccga	tattggaggg	ttcacagccc	240
atgaagaaga	tcaggaaagg	gccgaggtcg	cggagctccc	agtatagagg	ggtcactttt	300
tacaggcgaa	ctg					313

&lt;210&gt; 121

&lt;211&gt; 415

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 121

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cgacatgtcg	aggaagaagc	tccggctgtc	gaaggaccag	tccgccgtcc	tcgaggagag	120
cttcaaagag	cacaacaccc	tcaatcctaa	gcaaaagctg	gcaactggcg	agcagctggg	180
gctgcggccc	agacaagtgg	aggtctgggt	ccagaacagg	cgagccagga	cgaagctgaa	240
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ccggcggtcg	cagaaggagg	tgcaggagct	gcggggcgctc	aagctctccc	cgcaattcta	360
catgcacctc	ttccctccca	ccaccctcac	catgtgcccc	tcctgtgagc	gcgtc	415

&lt;210&gt; 122

&lt;211&gt; 385

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 122

ggagagccag	aagctcatgg	aggcgggtcca	gaacggcgac	gtctcggccg	ccgtggacct	60
cctcgaccaa	gacctctcc	tcctcgacag	gatcatcgtc	ctcggcgctct	ccgacacgcc	120
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gcggaacctc	gacgggagg	cgccgatcca	cgtggcgagg	atcaagggcc	gggtcgacgc	360
ggtgggacgg	atggtcgggg	ccgtc				385

&lt;210&gt; 123

&lt;211&gt; 282

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 123

gtatagcggg	tatttaagta	gcttgaaaca	agaactctcc	aagaagaaga	agaaaggaaa	60
actacctaag	gaagcccggc	agaagctgct	tagctggtgg	gagttacact	acaaatggcc	120
atatccatcg	gagacagaaa	aggtggcatt	ggctgaatcc	actggtttag	accagaaaca	180
gataacaat	tggttcataa	atcatgttat	agagtgttgg	gtaaagtcca	tggcaaccct	240
aatgcaagaa	atatttttga	tgactaaggt	cattcttagg	tc		282

&lt;210&gt; 124

&lt;211&gt; 383

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 124

gcactttcag	cttcggcatc	ctgaaggccg	gcgagggagg	tgatggtgtc	gcggacgacg	60
aactcggggg	gacgaggcag	ctgttcccgg	tgagggagggt	ggatgcggat	atggagtggg	120
gcggcgagtc	gtcctcgctt	gataagagga	gcgatgtctt	cttggttggg	gcttgtaagg	180
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ggtcaaggag	ctcgcagtat	agaggggtta	ctttttatag	gaggactgga	agatgggagt	300
cgcacatatg	ggactgtgga	aaacaagtgt	atttgggtgg	attcgacact	gcacatgctg	360
cagctagacc	tatgatcgag	ctc				383

&lt;210&gt; 125

&lt;211&gt; 350

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 125

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atgcaccata	atcggatata	taggtttgat	gttcttcgag	ggctctctgg	tggttgcttc	180
gcctttacat	tatgtgtcct	agtgtatgaa	ttgttagttg	tgccacctga	tcaaatcatg	240
ttatagagtg	ttgggtaaa	tccatggcaa	cccaatgcaa	gaaatatttt	tgatgactaa	300
ggtcattctt	aggtcatatc	tatgtatcct	cttatatgtc	ttgggtttcc		350

&lt;210&gt; 126

&lt;211&gt; 539

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 126

gctgccttcg	aaggcatgga	ctcgtctccc	agcccaagga	agaagaagaa	ccagctgggtg	60
aacagaagaa	ggttcagtga	tgaacagatc	aggtcactgg	agtctatctt	tgaatccgag	120
tcgaggctag	agcctcgga	gaagctgcag	ctcgctaggg	aattggggct	gcagccccgc	180
caggtggcca	tttggttcca	gaacaagaga	gcccgatgga	agtccaagca	gctggagcgt	240
gacttcgcca	ttcttcgcgc	caactacaac	gccctctatt	cccggttcga	gtctctcaag	300
aaagagaagc	aatccttggg	cactcagatt	gagaaactaa	accaactcgt	cgagaagccg	360

caaggagagg	gccagagctg	cgggcatgat	ttggcaacga	acagcaccga	tcgcgaatcc	420
gacaatgggg	ttcccaagta	tgaagacagt	cagcctgtat	ttccggataa	actaacgcgt	480
ttgatgggaa	tcccatgtga	ggatgactac	tttggcctaa	agagagcaga	gcctcctaa	539

&lt;210&gt; 127

&lt;211&gt; 493

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 127

taacctcacg	gacaagctgc	ttcacaaggg	aaatgagaag	gagagtccg	agtcgtccag	60
caaatacatc	caagggtat	tccagaaccc	cattgctgat	tctgtttctg	aggacgaagt	120
gtccagagtc	cccattccta	catggccaga	ggatatttgc	tcggtcaaga	gcgacatgtt	180
cgattctgaa	agtcgcgatt	acaactgacg	tgccactctt	tcgctcttag	agcccggcga	240
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gagcaagagc	cttttgtcca	ctcgcaatta	cccaaagctc	gaaaactctg	actacgccat	360
cctgcctcca	aattcgtgta	actttggatt	ccatgctgag	gatcctgcct	tttggccttg	420
gtcataactga	aggcgctcct	gatgccgttc	actccctttg	ttttcttgta	tcatatatga	480
ggggatacgc	tat					493

&lt;210&gt; 128

&lt;211&gt; 627

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 128

ccgagaagag	gacccccaa	aagagagggg	ggaagccagg	cctcggccgc	gacacgccgc	60
tgaaccacgt	ggaagccgaa	cggcagcgcc	gggagaagct	gaaccaccgc	ttctatgcgc	120
tgcgagcggg	ggccccgaac	gtgtccagga	tggacaaggc	gtccctgctc	tccgacgcgg	180
tgtcctacat	caacgagctc	aagtccaaga	tcggcgatct	ggagtcaccg	ttgcagagag	240
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aagatctcag	agctgcgctt	cttcggggcac	tggacaacatg	acggtcggag	aaattgccgg	600
gggagagaga	gagagagtac	gtactgt				627

&lt;210&gt; 129

&lt;211&gt; 385

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 129

ggaagatgac	aaactagggg	gaaatagagc	atctgcaaac	gtgggtacaat	catcttctgt	60
aaaggggagg	ccttctgggtg	gaactcttgt	tgtatgccct	actagtgtgc	ttaggcagtg	120
gggtgatgag	ctgaaaaata	aggtttcaga	gaaggctaag	ctatctgtat	gtatgtatca	180
tgggaccacc	aggaccaaag	atccatatga	attagctaag	tatgatgttg	ttctgacaac	240
atattctatc	gtaagcatgg	aggtaccgaa	acccgctggg	tttaaagatg	agaaggatag	300
tctgcaagat	gatgatgatg	cgtttttttg	taggaagaga	aagcactctg	ctaaatctga	360
gaaaagacgc	ttgaagaaag	aaatg				385

&lt;210&gt; 130

&lt;211&gt; 345

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 130

tttcagattg	tttatcaatt	ggttgctaga	cttcaactcc	gcagattctg	ctattgatag	60
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agttccagcg	ttcagctttg	catggctcga	gctgggttagt	cacaggagtt	tcatgccaaa	180

gattctctca	gggaactctc	agaaagggtg	gccttacttc	cagcgccctgc	tggttgactt	240
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&lt;210&gt; 131

&lt;211&gt; 766

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 131

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cccaaaaccc	catcggaccc	aaaaacccta	acgaagatga	atagggagag	gcttatgaag	120
atggcggtt	ctgtccgcac	tggtggaaag	ggtaccatga	gaagaaagaa	gaaggctgtt	180
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caggtgactg	aggccactaa	ggtgactgag	gcaactccgg	cctcctagag	agagggattg	660
ttattgtcat	ttcaataactt	gtagtgtcat	taaaatcctt	atcttctctc	atttgtctgt	720
ctttccattg	tacttttaac	gaactgtttt	aatctcgtga	ggcttg		766

&lt;210&gt; 132

&lt;211&gt; 162

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 132

ggatcttgcc	aaaagggtga	ctcctgtgag	tacgcgcacg	gcgtatttga	gtcgtggcctt	60
catcctgcac	agtatagaac	aagactgtgc	aaggatgaga	ctggatgtgc	tcgcaaagtt	120
tgtttctttg	ctcacaagcc	cgaagaatta	aggcctgtct	at		162

&lt;210&gt; 133

&lt;211&gt; 518

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 133

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cacgaactat	tggcaatcga	tctcatggct	tcctcgagcg	gaacgtcttc	cgggtcaacc	180
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gtccagatga	acgagctcac	caacaggctg	gagtccttga	aggatatact	cggtatcctg	480
gatgccggag	atggtggcag	accaggaaat	ggtggcgg			518

&lt;210&gt; 134

&lt;211&gt; 413

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 134

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acggccacct	cttcaataac	atctccctcg	gcggccgcgg	cggctccaac	cctggacaga	120
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ttagtttgac caactttttc caaaataacct gcgggttaac tccggaggag aaacagcttt	360
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 <212> DNA  
 <213> Eucalyptus grandis

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 <213> Eucalyptus grandis

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tgcagcatgc tagtgtttct gtggtgaacg agctcatgat ccagcaagcc acagttaaga	180
tggggagtca gttgtacact caggagcagc tcaaggcagc tctattggcc gtaatat	237

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cggagtaccg gcccgcgtgt agccccacgt tttctagcga gctgcactcg aaccaccacc	240
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 <212> DNA  
 <213> Eucalyptus grandis

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947

<210> 139

<211> 509

<212> DNA

<213> Eucalyptus grandis

<400> 139

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ttgggaggac	gggaaaaatt	caagaatgtc	cgttctgtca	aaaagcgatt	ctggtgagat	360
tagggagggt	tgggaataca	atctggaaga	cgagttttcg	ttcattcgcg	aaatcgagg	420
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gaatttcaag	agcagctccg	agtctcatt				509

<210> 140

<211> 426

<212> DNA

<213> Eucalyptus grandis

<400> 140

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accaagaagc	tacaggatat	cctccctggc	atcatcaacc	aattagggtc	tgataacttg	360
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tctgggt						426

<210> 141

<211> 310

<212> DNA

<213> Eucalyptus grandis

<400> 141

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ctcagagccc	ttgtacccaa	gataagcaag	atggataagg	cttcgatagt	gaaagatgct	240
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tcaaatctgt						310

<210> 142

<211> 622

<212> DNA

<213> Eucalyptus grandis

<400> 142

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tgcagcatgc	tagtgtttct	gtggtgaacg	agctcatgat	ccagcaagcc	acagttaaga	180
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<210> 145  
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<212> DNA  
<213> Eucalyptus grandis

<400> 145  
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gccgcc 546

<210> 146  
<211> 640  
<212> DNA  
<213> Eucalyptus grandis

<400> 146  
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&lt;210&gt; 147

&lt;211&gt; 236

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 147

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&lt;210&gt; 148

&lt;211&gt; 520

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 148

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&lt;210&gt; 149

&lt;211&gt; 148

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 149

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&lt;210&gt; 150

&lt;211&gt; 443

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 150

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443

&lt;210&gt; 151

&lt;211&gt; 341

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 151

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&lt;210&gt; 152

&lt;211&gt; 603

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 152

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atc						603

&lt;210&gt; 153

&lt;211&gt; 984

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 153

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&lt;210&gt; 154

&lt;211&gt; 1144

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 154

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&lt;210&gt; 155

&lt;211&gt; 238

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 155

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&lt;210&gt; 156

&lt;211&gt; 950

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 156

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&lt;210&gt; 157

&lt;211&gt; 272

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 157

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&lt;210&gt; 158

&lt;211&gt; 863

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 158

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&lt;210&gt; 159

&lt;211&gt; 936

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 159

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&lt;210&gt; 160

&lt;211&gt; 281

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 160

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&lt;210&gt; 161

&lt;211&gt; 291

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 161

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gagctcgaag	ccctccacaa	caccgcccgc	ggggccaccg	tcggaatatc	aagcagcttc	180
aagtgggtgg	gggtgctgct	ctggcactgc	agccctgggc	gggtctctcg	tacccccagt	240
ttcgatcggg	atatcggttcg	ccaaccccg	cccaatctcc	actgtccgcg	g	291

&lt;210&gt; 162

&lt;211&gt; 743

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 162

cctctttccc	ctcagcgaat	ggagatggaa	gatcaccacc	agtacaccgc	ggcagatttg	60
cggcacctca	tcaacgccc	tccacctcca	ccccaccgc	acatccagtc	gatctccccg	120
cctgagctat	tctgcggcg	cggcgccac	cggaaaccga	cgcagcactt	ggagtccgatg	180
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tttcatcttc	cacccaacat	caatgatatt	aaccaagatg	cgtctcatca	tcgtcatcct	720
catcaactgc	agagaccgtg	cga				743

&lt;210&gt; 163

&lt;211&gt; 394

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 163

ctcaaatata	caccgacaaa	aaaacaagca	ttgtcagaat	gtcaattcca	aactgatttt	60
ttcggcacga	gagagtctga	atggaacgcg	gcgatccgaa	cgttgctgcc	gtcgccaggc	120
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tcgtaggacc	tactgattgg	gaagattatt	cattggggaa	ggaagggtgc	gccagggtacc	240
gggttcataa	cctcccgaaa	agcccggggc	cggggatata	tgagctcggc	gtagccgctt	300
ctcatgccaa	attgggtcgt	gagatcgcca	agctcgaccc	gcgatatata	gtcgtgggtt	360
accttgggaa	ggcggactgt	gtcaggacca	gact			394

&lt;210&gt; 164

&lt;211&gt; 1017

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 164

cacctctttg	ctctttcttc	cacacgggtca	ccactttccc	ctgcaactcc	ccctttctct	60
aaagcccttg	cgtgcgagag	atattccatg	gattagggct	ttccagaaaag	taaaacaacc	120
tccctcagct	cctcttcacc	actggttttt	gagatgatct	gtgtgctcgg	cggcgttgat	180
tattatgtct	tattctgact	tgctgaacct	gctgtttgcc	gtgggcgttt	ggtgcaccgc	240
gtatattgag	gctgccgttc	tcgagtcgct	cgggtctctc	catactctct	gttcgttttg	300

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acctcgagtg	ttgttgctag	agttgaacca	aacaatggct	cctaagtttg	agaagctcaa	960
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&lt;210&gt; 165

&lt;211&gt; 376

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 165

tatccaacca	ttatttatcg	tccctacagt	tttatggcca	aaatcagcgc	cgtggagcgc	60
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aatcatcggt	ataccgccac	gatgcttcag	catattgctg	aagatcgtga	cgggacgagtg	240
cattaaccca	gcacgcagcc	gggttgcaatt	aaattacggg	gtaagtcgaa	gacgtggcta	300
agatcgtggg	gaatatgtcc	gccaggcgca	ttttccagat	agcgtatgcag	ataatcccga	360
tacataggat	gtgcac					376

&lt;210&gt; 166

&lt;211&gt; 689

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 166

aaatagaaga	agaagaagaa	gaagaagagg	atgatgatga	cgattgatga	ggtaagagac	60
gtcactgggtc	aatgggtcatg	cgctgaagct	ttctaccttt	aatgcaagca	tccatcgtct	120
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gtcttcaagc	gacgcgtgca	ctgattgaag	cgctcctcata	ggcttgtgag	atgatccaag	240
accttttccact	gcttgtgata	ctctttataa	aggacgaggg	atggcttctga	tgaatcagcc	300
catctagaga	ggcttccacc	atatcacagt	ttggacttgt	gccaatgccca	aaaggttcaa	360
gcataaagat	gggagttcca	ctgcaacatt	ctagtgggtat	caaacaattg	aatgttcatt	420
ttcaagagcg	ggacttgtgt	tctactcaat	caaccagtc	atcattcagt	gaagtgccta	480
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aaactgaagg	gcaatcagtg	agaggacaag	caaaatcagc	cttgtcaatg	ggaactcagg	600
atttagtctt	ccaaccttta	gaggtgtgca	tcccactcca	ctatgctgaa	ccatccttgg	660
gtgggttttat	gcccgtgct	tatgggcca				689

&lt;210&gt; 167

&lt;211&gt; 1566

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 167

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accgaccacc	acactatgaa	agatctaagt	ttgaggcaat	gggaagtggg	gtctacacct	300
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gaaacagtat	ggcccaagg	agtggcacct	tgtgtctcag	cgcatgaaca	ctcccccttaa	420
ccgtgatgcc	aagtcctgct	tagagaggtg	gaagaactac	ctgaaaccag	gtataaagaa	480
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tcaaccgatt	ccgtggctgc	aggcagatag	aggactcgat	agtggttctc	tctcactgac	960
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tctgcttatt	agaattccaa	gactcccttt	tcctacccaa	caaacaccta	cctttacgta	1500
tatctcaata	acattacaga	gctttctcatc	ctcagctaag	tcctctgaga	cattttgtat	1560
ggaat						1566

&lt;210&gt; 168

&lt;211&gt; 381

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 168

agggtctgga	ttcctgttcg	gtcagaggagc	tccaacaaac	agaaaaccag	ttggaaagaa	60
gtctaaccaa	gatcagggca	agaaagaacc	atttaattag	ggagcatatt	gagcggctaa	120
aagcagagga	gcggaacta	ctggaagaaa	agagaaagct	acttcaagag	attgaatgcg	180
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ttctgcgatt	gctcaaaata	atgaccatag	caacggaaac	gcttcttctg	ctgctctttt	360
cttcttcaat	cgtgaggcaa	g				381

&lt;210&gt; 169

&lt;211&gt; 331

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 169

ggaggatcca	gtgggtcggc	ccgagagtgc	cagtgagatt	agccaagagc	cgggtcaaga	60
gtttatggat	gaagacgagc	tcttgaacat	gccgaaactg	ctggacgaca	tggcggaagg	120
aatgctggtg	agcccaccga	ggactcagat	ggcctcagag	aacgactcgc	cggaggactc	180
agatgggtga	gagagcctgt	ggagttatcc	ctaattttag	aagggtgagat	gatcagggct	240
tatcaattac	agtagtcctc	attgtagaca	tatacgaata	cgatatccat	tgtatatgat	300
caggatttcg	tcatgatggt	tgatcgcatc	c			331

&lt;210&gt; 170

&lt;211&gt; 950

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 170

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ccttggtgcg	tgatgtgtgg	aggcgccatc	atttccgact	tcgtcgagga	gcggctcgac	120
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aaactcgtgt	tctagctttg	ggatgcttaa	ctatgccatg	ttttagacgt	gtaagaaccg	900
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&lt;210&gt; 171

&lt;211&gt; 376

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 171

ccagcagagg	ctgctgcagt	actggagtga	cgcgctgaat	ctcagcccga	gggggaggat	60
gatgatgatg	aatcggttgg	ggcccgacgg	caggccgatc	ttccggcctc	cgcagccgat	120
aaacaccacg	aagctctatc	gtggagtggag	gcagcggcat	tggggcaagt	gggttgacga	180
gattcgcttg	ccgaggaacc	gaacccgact	ctggctcgga	accttcgaca	cagccgagga	240
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tttccccgag	cttttctca	acaaggacaa	ggctgaggaa	tccgctggtc	caagctcgtc	360
atcttcgtca	cccccc					376

&lt;210&gt; 172

&lt;211&gt; 427

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 172

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tcatcgagcg	gtttcgctat	gccgagtgca	ggtgtcggcg	gatgttctct	ttcctctcca	420
aagcagc						427

&lt;210&gt; 173

&lt;211&gt; 607

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 173

gaaacacctt	ttgaataaca	tctaccgacg	caaaccaatc	catagccatt	cggggcaggg	60
tgctcgggta	tctgattcgg	agaaacagat	gtacgaggag	gaaatcaaga	gactgcgaca	120
cgagaagagc	tcgcttcagt	tggagcttca	aagatatcag	ggagataatc	aggatgttga	180
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gatcaccgtc	ttagctcaat	taatgcagaa	gccagtattt	gcttctcttt	ttacgcagca	300
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tatocac						607

&lt;210&gt; 174

&lt;211&gt; 719

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 174

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gctttggggg	ggcgcgcgga	aatctagggc	tccgctccgc	cgctcctcct	cgctcgccgc	120
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ttgtcgggtat	tcctcatgct	aggatgcctc	tgccccttga	cctggcacia	gaaccttgt	719

&lt;210&gt; 175

&lt;211&gt; 570

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 175

actggggcca	atgagaagga	ttctgtgatg	gaaattacat	ttcacgtgcc	caactccaac	60
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tcagtggcag	atgttggggc	tggaggtgaa	gatgctgttg	ttacatttga	gggaattgcc	180
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aagggactca	ttcatgaagt	gttcaccacc	atcttgccgg	gtttatccgg	tgccaaagtc	540
acgaaaccag	gaaaattccg	tagttctcaa				570

&lt;210&gt; 176

&lt;211&gt; 754

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 176

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gcagctctaa	tggatatgct	ggagcaaattg	gtgtcggtta	tgggcgaccc	aattcagcgt	120
cttgggtgctt	acctcttgga	agggcttagg	gcgaaattga	aattttccgg	gagcataatt	180
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gcagtgaact	gtccttacat	attgcatcac	ataccgatg	agagtgtgag	cactcagaat	660
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gagcaagaat	ccaacaccaa	cacatctca	ttct			754

&lt;210&gt; 177

&lt;211&gt; 525

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 177

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gatttggaagg	ttaacacaca	tgtgtatgta	actgggttgc	ctgaggatgt	cactatggag	240
gaagtgggtg	aggttttttc	caagtgtgga	atattaaagg	aggatcctga	aacaaaaaag	300



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acttatttaa	aggagccctc	agttgcccta	gctatccaaa	tattggatgg	agcacctttt	420
cgccctgggtg	gcaaggtacc	gatgtcgggt	agccaagcta	agtttgagca	gaaaggtgat	480
aaattttattt	ctaaacaagt	ggacggcaag	aagaaaagaa	actga		525

&lt;210&gt; 178

&lt;211&gt; 978

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 178

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acgtccggag	aaaagaag					978

&lt;210&gt; 179

&lt;211&gt; 566

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 179

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gatgcagtg	ttcgagtaga	gagcggccgg	aaggatcatc	ctgcagcaag	gttaatgggtg	480
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atgatccagc	aagccacagt	taagat				566

&lt;210&gt; 180

&lt;211&gt; 521

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 180

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cgtacgccca	tcccggcgag	aaggcccgcc	ggcgggaccc	gcggaagtac	cactactccg	480
gcaccgcgtg	cccggagttc	cggaagggga	gctgccggaa	g		521

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 <212> DNA  
 <213> Eucalyptus grandis

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 ccctggggcgg gcacaagcgt tgccactacg atggcgggcg cagcggtccc gccaacagcg 180  
 gggtcaccac gtccgagggc gtgggggtccg cggccccgcc cgcgctcggg tacgacagcg 240  
 gccgcccga ctccgacctg aacgtgcccg cgtgcccga gttcccgaac gggttcatcg 300  
 tgtcggggcga cgacgaggtg gagagcccc acccctcgaa gaagccgcgc ttctcgacgc 360  
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<210> 182  
 <211> 610  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 182  
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 ggccgcccgt ttccgttctt attgcaattc tcaagataga tccatggcat tcgagcagta 180  
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 cgccaattcg 610

<210> 183  
 <211> 767  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 183  
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 gccagggcca attgcttgat gtcctctccc cgagttggcg agagcaccga ctcggcgtcg 180  
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<210> 184  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 184  
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tgcagaccat	cgcgtgcgtc	cctgttttga	acggtgtggt	cgaactgggt	tccaccgagc	240
cgatctacca	gagctccgat	ctgattagcg	gaattagggg	gctgttcaat	ttccatgaat	300
cggagatggg	atgcgggtgg	agggttttga	atagcgagca	tgacccggcg	tcgctttgga	360
tctgcgatcc	gccagtcacg	atggagatta	acgatcgtcc	tatgacattt	cagatagaga	420
accccagctc	gagcagtcct	accgaaagcc	ccagcgcgat	ctgcgcgat		469

&lt;210&gt; 185

&lt;211&gt; 533

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 185

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&lt;210&gt; 186

&lt;211&gt; 413

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 186

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gaactacctg	aggcctgaca	tcaaaagagg	caacatatct	cccgatgagg	aagagctcat	360
catcaggctt	cacaagcttt	tggggaacag	gtgaaacttc	ttctgttctg	acc	413

&lt;210&gt; 187

&lt;211&gt; 574

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 187

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&lt;210&gt; 188

&lt;211&gt; 988

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 188

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cgccgagagc	atcaccgccc	ctgagacc				988

&lt;210&gt; 189

&lt;211&gt; 536

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 189

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&lt;210&gt; 190

&lt;211&gt; 2444

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 190

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&lt;210&gt; 191

&lt;211&gt; 473

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 191

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&lt;210&gt; 192

&lt;211&gt; 468

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 192

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&lt;210&gt; 193

&lt;211&gt; 968

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 193

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&lt;210&gt; 194

&lt;211&gt; 345

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 194

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&lt;210&gt; 195

&lt;211&gt; 456

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 195

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&lt;210&gt; 196

&lt;211&gt; 569

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 196

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&lt;210&gt; 197

&lt;211&gt; 1007

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<210> 198  
<211> 390  
<212> DNA  
<213> *Eucalyptus grandis*

<400> 198  
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<210> 199  
<211> 586  
<212> DNA  
<213> *Eucalyptus grandis*

<400> 199  
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<210> 200  
<211> 619  
<212> DNA  
<213> *Eucalyptus grandis*

<400> 200  
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&lt;210&gt; 201

&lt;211&gt; 376

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 201

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&lt;210&gt; 202

&lt;211&gt; 743

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 202

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&lt;210&gt; 203

&lt;211&gt; 435

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 203

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&lt;210&gt; 204

&lt;211&gt; 662



&lt;212&gt; DNA

<213> *Eucalyptus grandis*

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&lt;210&gt; 205

&lt;211&gt; 694

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 205

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&lt;210&gt; 206

&lt;211&gt; 1210

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 206

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<212> DNA  
<213> Eucalyptus grandis

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<212> DNA  
<213> Eucalyptus grandis

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<212> DNA  
<213> Eucalyptus grandis

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<210> 210  
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<212> DNA  
<213> Eucalyptus grandis

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&lt;210&gt; 211

&lt;211&gt; 1160

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 211

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&lt;210&gt; 212

&lt;211&gt; 850

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 212

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&lt;210&gt; 213

&lt;211&gt; 534

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 213

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&lt;211&gt; 358

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 214

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&lt;211&gt; 988

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 215

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&lt;210&gt; 216

&lt;211&gt; 669

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 216

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aagtgagtt						669

&lt;210&gt; 217

&lt;211&gt; 334

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 217

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&lt;210&gt; 218

&lt;211&gt; 478

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 218

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&lt;210&gt; 219

&lt;211&gt; 1677

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 219

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&lt;210&gt; 220

&lt;211&gt; 916

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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&lt;210&gt; 221

&lt;211&gt; 567

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 221

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&lt;210&gt; 222

&lt;211&gt; 985

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 222

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&lt;210&gt; 223

&lt;211&gt; 335

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 223

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&lt;210&gt; 224

&lt;211&gt; 377

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 224

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&lt;211&gt; 394

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 225

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&lt;210&gt; 226

&lt;211&gt; 340

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 226

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 <212> DNA  
 <213> Eucalyptus grandis

<400> 227  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 232  
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 <212> DNA  
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 aacagagggt ctctggcact gtaattggat ctgaggatgt tgatcctccg aggtggcctg 420  
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&lt;210&gt; 237

&lt;211&gt; 298

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 237

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&lt;210&gt; 238

&lt;211&gt; 521

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 238

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&lt;210&gt; 239

&lt;211&gt; 337

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 239

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&lt;210&gt; 240

&lt;211&gt; 334

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 240

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&lt;211&gt; 181

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 245

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c						181

&lt;210&gt; 246

&lt;211&gt; 117

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 246

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&lt;210&gt; 247

&lt;211&gt; 597

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 247

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&lt;210&gt; 248

&lt;211&gt; 361

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 248

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&lt;210&gt; 249

&lt;211&gt; 472

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 249

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&lt;210&gt; 250

&lt;211&gt; 302

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 250

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&lt;210&gt; 251

&lt;211&gt; 708

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 251

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&lt;210&gt; 252

&lt;211&gt; 563

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 252

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&lt;210&gt; 253

&lt;211&gt; 397

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 253

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&lt;210&gt; 254

&lt;211&gt; 353

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 254

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&lt;210&gt; 255

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&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 255

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&lt;210&gt; 256

&lt;211&gt; 477

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 256

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&lt;210&gt; 257

&lt;211&gt; 351

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 257

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&lt;210&gt; 258

&lt;211&gt; 360

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 258

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&lt;210&gt; 259

&lt;211&gt; 318

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 259

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&lt;210&gt; 260

&lt;211&gt; 503

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 260

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 <212> DNA  
 <213> Eucalyptus grandis

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 <211> 454  
 <212> DNA  
 <213> Eucalyptus grandis

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&lt;211&gt; 366

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 265

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&lt;210&gt; 266

&lt;211&gt; 376

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 266

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&lt;210&gt; 267

&lt;211&gt; 341

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 267

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&lt;210&gt; 268

&lt;211&gt; 343

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 268

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343

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<211> 546

<212> DNA

<213> Eucalyptus grandis

<400> 269

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<211> 283

<212> DNA

<213> Eucalyptus grandis

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caattatata	agtagacatg	ggttgggatg	ctggagtctg	gttccgaagc	tagctggttt	240
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<210> 271

<211> 377

<212> DNA

<213> Eucalyptus grandis

<400> 271

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ggcaagtggg	atggagaacc	gggggggaaat	tcctgcgaat	ttgaagaaac	agcttgctct	180
ggctgtgaga	aaaatccaat	ggagctacgg	aatcttctgg	tccatctcaa	ccagacagcc	240
tggggtcttg	gagtggggtg	atgggtacta	caatggagac	atcaaaacca	ggaaaacaat	300
tcaagctgtg	gaacttaata	ctgaccagat	tggtatgcag	agaagcgagc	aactgaggga	360
actatatgag	tctctat					377

<210> 272

<211> 548

<212> DNA

<213> Eucalyptus grandis

<400> 272

ggaatatcca	gaggaatgag	taccataatc	tttttaactt	catcagtggg	aaggggttga	60
agatcatgaa	cttgggagag	cagggcgctg	atggagtacc	aggcgttctt	gatgtggatg	120
acgacgatgc	tgctgatccc	catcttgagc	gcatcaggat	tgaagccggt	gtagatgaaa	180
gtgatgaaga	ggatgaagat	tttgtcattg	ataaggatga	tggaggatct	cctactgatg	240
attctggaga	tgacgagtc	gatgtcagtg	aaagtggaga	tgagaaggag	aaagagaagt	300
atgggaaaaa	ggaatctcga	aaagaagtca	aagcatcatc	aagcaagaag	aaagcaaaa	360
ctggagatga	agaggggtcg	aagaagaaga	aacagaagaa	gaaagacccc	aatgcaccaa	420
aaaaggctat	gtctggttat	aactttttct	tgcagacgga	aagcgagaaa	atgaagagaa	480
ctaattcccg	tctttccttt	ggggatgtat	caagagaaat	tgcagacaag	tggaggggtt	540
tgctcagcg						548

<210> 273  
 <211> 420  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 273  
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 ccttggctcc gttctgttgc ttcctctctc tgtcttcgac acttcaactg tgcgagccca 120  
 aaaatcgatc cttttctgct tccttttgcc tctgttccaa gagtcaattg atactgggtc 180  
 gatctggctg gcaacttttg ttggaagttt gaggaatctg attgagagaa gaggtagatc 240  
 taaaggatca aaaggatgtc atttaccggc acccaagtta aatgcaaggc ttgcgaaaag 300  
 acagtttatc ctggtgaaca gttatctgct gatgggggtg cataccacaa gtattgcttc 360  
 aagtgcagcc actgcaaagg cacattaaag ctgagcagct actcctcaat ggaaggagtt 420

<210> 274  
 <211> 454  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 274  
 gataaatcgt cttcaccagt acctccgcag gatcagacgg gtgttcatgt ttatcatcct 60  
 gattgggctg ctatgcatgc atactatggg ccaagagttg ctcttcgcc ttattataat 120  
 tctgctgtat catctgggtc tggctctcat ccctacatgt gggggccacc acagcctatg 180  
 atgccaccat atggggccacc ttatgctgca atatactcac atggaggtgt ttatggacat 240  
 cctgcaattc ctcttactcc gactcccttg gctgcggaaa ctcttaaaaa gtcactctgct 300  
 aattctgata atggactggg gaagaagttg aaaagttttg aagggttgc aatgtcaata 360  
 ggcagtgggg gggatgcaga cagtgtgac gatgggactg ataaaagggtc atcacagagt 420  
 gcagactcgg gagactcaag tgatgaggat caat 454

<210> 275  
 <211> 620  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 275  
 gcgatttaaa cagctactgg aggaggcatc acaggatatt gatcacacaa ctgactatta 60  
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 agagaattta ttgaatgaaa gggctctccc tttaaaaaag gctgctgaag aaagggtcga 180  
 agcaatgctg gctgctgcca cttctagttt taaatccttg ctctgagata gaggagatat 240  
 aactgtcaat tcccgttggg ccagggtaaa ggatagtctc agggatgacc caagatacaa 300  
 gtcagtgaag catgaagaca gggaggcctt gttcaatgag tatatagctg aattgaaggc 360  
 tgtggaagac agagaagaaa aggaggcaaa agctaagagg gaagagcagg agaagctgaa 420  
 ggaaagggaa agagaattgc gaaaacggaa ggaaagagaa gaacaagaaa tggagagggg 480  
 acgagtgaaa atacgcagga aagaggcaat tgcactttt caagcattgc ttgttgaaac 540  
 aatcaaggac cctcagcttc ctggacagag tcaaaagtta aacttgacaa agatcctcag 600  
 gacgtgctgac taatcctgat 620

<210> 276  
 <211> 340  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 276  
 gagataaaga actactggaa tacaagaatt aagcgactgc aacgcactgg catgcctata 60  
 tatccaactg aggtttgtct gcaagtgtca agtgagaatc aagaaactca taacatgggt 120  
 aacttgata ctgcaggcga agataattgt gatctctcac aggcagatcc actcgagatc 180  
 ccagaggtgg attttagaaa actggaactg catcttggtt tctcgtcttt ttggtctaca 240  
 cttctggacg ttcctccttg tggctttggg agagaggcaa tgtgtctatc tgatgcttac 300  
 tgcttccat ttccatcaag ccggtctcct aaacgccttc 340

<210> 277  
 <211> 351  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 277  
 cgacgacccg catacccgct gccaatctgg aggacctatt tgacaaccat aacatggctc 60  
 gaatacggga cgtatgggcc ccgaatcttg agatagagat gcagaacatc cgcgaggcca 120  
 tcgagaaata ctctgtatgtt tcaatggaca ccgagttcct gagtggggcg cggcccatag 180  
 gtaacttcaa aacgtcctcg gactaccact accagacgat gcgctgtaac gtcgaccttc 240  
 tcaagatcat ccaagtcggg atcacgctgg cagacgagga ggggttggtc ccgcaggact 300  
 gctctacgtg gcaagttcaa ctttaaattt agtctttggc gacgacatgt c 351

<210> 278  
 <211> 337  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 278  
 gcagccgagt cgagcaagaa actaacgaac gcccggtgtc attaggattc ataatccaca 60  
 agaacaaaag aaaaaaggat catgggaaga tccccatgtt gcgaaggcaa tggcctgaag 120  
 aaagggccct ggtcttctga ggaagacaag aagctccttg attttatcca gcagcacggc 180  
 catgggagct ggatctctct ccctaaacgt gcaggtctta atagatgtgg caagagctgc 240  
 agattgagat ggataaacta cttgtggccg gacatcaaga gagggagttt ctccccggaa 300  
 gaagaacaaa ccatcttgca tctccactcc gtgctcg 337

<210> 279  
 <211> 383  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 279  
 ctccaacgcg cgccttcttc tcttgactc ctctgagctc tctccatctc ctccggctcg 60  
 gcgcggccgt cgctcgacgg cgacgactcg agggtttcca tataattcac ttgaaagaag 120  
 ctgcagaatg ccgtggaaaa caggacttac cggctctaaa acggaagaag ataaggctct 180  
 gcagctttgt cgggagagaa aaaaatctgt taggcaagct gttgatggtt ggggctccct 240  
 tgtgtatgca catttcatgt ttgtgcaatc attaaggaac gtagggacag ctctcacaaa 300  
 gttctttgaa acagaatctc caaatgggtc tccctcgat gcctcaatga gtacaacacc 360  
 tgagccaatc gcattaaccg aga 383

<210> 280  
 <211> 312  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 280  
 ggtttgctca gatgcagcaa gagctgcagg ctgagatgga ctaattacct ccgtcccggg 60  
 atcaagcgcg gtagcttcac ggaccaagag gaaaagatga tcgtccacct tcaggctctt 120  
 cttggtaata gggggcgccg catagcttcg taccttctc agaggactga caatgatatc 180  
 aagaactact ggaataccca tttgaagaag aagctgaaga agcttcaagg ccaagcaaat 240  
 cctgatgatg atgaccataa tcatcaccca caagggttca acgcaacttc acactccaac 300  
 cccaagggcc ag 312

<210> 281  
 <211> 311  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 281  
 gagatggcga ggacaccatg ctgtgagaag atggggatga agaaagggcc gtggactcca 60  
 gaggaagacc agatcctgat ctccacatc caccagtttg gtcactcaa ctggcggtgca 120

cttcttagac	aagcaggtct	gttaagatgt	gggaagagtt	gcagactccg	gtggataaac	180
tactttgcgac	ccgacgtgaa	gcgagggaa	ttcaccgacg	acgaaagaga	caccatcatt	240
gaacttcatc	aagttcttgg	caacagatgg	tcggccatag	cctcgagatt	gccggggcga	300
acggacaatg	a					311

&lt;210&gt; 282

&lt;211&gt; 378

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 282

catggacagc	tgaagaggac	aagaagctca	tcaacttcat	cctcacccat	ggccaatgct	60
gttggcgggc	tggtcccaag	cttgctggac	tgctgcggtg	tggaaagagt	tgcaggctga	120
ggtggaccaa	ttacctgagg	ccagacttga	agagaggcct	tttgtccgag	tatgaagaga	180
aaatggtcat	tgacctccat	gcgcaacttg	gcaacagatg	gtcgaaaata	gcctctcacc	240
tcccgggaag	aacagacaat	gagatcaaga	atcactggaa	cactcacatc	aagaagaagc	300
tcaagaagat	gggcattgat	cctctcactc	acaagccatt	agtcaccaac	aacgacaaca	360
caaccgatca	acaacccc					378

&lt;210&gt; 283

&lt;211&gt; 389

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 283

ctccctcctc	ctccaaacgt	ttccgtttct	ctccaagctg	aacatggaca	agaagccaga	60
cgacgacagt	ggtaagtccc	aagatgtcga	ggtgagaaaa	gggcctgga	cgatggaaga	120
ggatctcatc	ctcatcaact	acatagcgaa	tcacggcgaa	ggcagttgga	actccctagc	180
caaagctgct	ggtctaaaac	gtaccgggaa	gagttgtcgg	ctccggtggc	tgaactatct	240
gcgacccgac	gtccggagag	gcaacatcac	tactgaggag	cagctcctga	tcattggaact	300
gcatggccaag	tggggaaaaca	ggtgagatgc	acataagtca	cacaactttt	cgttacatag	360
gttctacaac	ataataccca	tcgatcata				389

&lt;210&gt; 284

&lt;211&gt; 385

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 284

ccaatggtga	cagtgttaag	gatgaccttg	atacagatga	atatgaaact	catgccacag	60
ttttggataa	gctattagca	tgggagaaaa	agctctacga	agaagtgaag	caaggtgagc	120
acatgaagct	agagtatcag	aaaaaggtgg	ctttgctaaa	caagcagaag	aaacgtggtg	180
ctagtgggtga	atccctggag	aaaacaaaag	cagctgtgaag	tcatttgcac	acgacataca	240
tagttgacat	gcagtccatg	gattcaactg	cttcagaaat	aaaccacata	agggacaaac	300
agctgtaccc	aaagcttgcg	caacttgtcg	atgggatggc	gaatatgtgg	gaaaaaatgc	360
gcatgcacat	tgataagcag	gagtc				385

&lt;210&gt; 285

&lt;211&gt; 461

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 285

caccggaaac	agtccatggt	cagaattatt	ctccaattca	tcaaatgggc	attgatggat	60
tctttccagc	gcacccctcc	ccacagaatc	cttcgtacca	ttcttactcc	cccaacaata	120
gacccaattt	ccctcctccg	tccccctcaa	cttcacagtg	ggactatttt	tggaaacccct	180
tttcatccct	ggactactat	ggatacccca	ctcggagtag	tattgatcat	atggctatgg	240
atgatgagac	caagagattg	aggcaggtcc	gagaggaaga	ggggattcca	gacttggaag	300
aagaaaactga	gcacgaagaa	tgtgatcacc	actcgtatgt	tgatgaagat	agaggcaaca	360
gagatgctaa	tttccccact	gaggaagttt	tagtggaaga	tggtgatgac	gaggaagagg	420
atgaggatga	aggaaacaga	cacagctgtg	aatctgagga	t		461

<210> 286  
 <211> 438  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 286  
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 caggtcgtgg aggtgggttag cgggctcgcc atcgatatac ccgagatacc tgatccgctt 120  
 atgaacccat ggcagctgcc ctgcccgatg cagccaatta cggcgtctgc cgacatgttg 180  
 cagctgtgag catcagattg gaagtgtaaa agttggggct gattcttttg gaggccccctt 240  
 ctgggggggat ggtagatcca tagccatttg ctgcttttgt ttttcttgtc aattccgttc 300  
 tctttcttga agttggaact ccaatatctg tatgcgtctg tctagatgga ctggcgcttt 360  
 tatgtctgct tgacattgta cttggctgtt cttgcttggt acttatggga tgttcctggt 420  
 ctaaaaaaaaa aaaaaaaaa 438

<210> 287  
 <211> 405  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 287  
 ctgaccttaa cagctgcaag cactgttata tttgcagagc tatcgtggac accgggtgat 60  
 ctgatccaag ctgaagatcg tgctcacagg attggtcagg tatcttcagt taatatatat 120  
 tacctgctgg caaatgacac tgttgatgac ataatatggg atgttggtcca gagcaagttg 180  
 gaaaatttgg gtcaggtgct tgatggccat gaaaatacat tggaagtctc agccagccaa 240  
 ccaactagaa acagccctgc aaagcaaaaa acctttaata gccctggcaa acagcataca 300  
 tttaatagcc ctgggaagca gcaaaaattt aatagccctg gcaagcagac aacactcgac 360  
 tcgttcatga agcgttgcaa tagtggtgac ccctctgaac atcag 405

<210> 288  
 <211> 515  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 288  
 ccctcttctt cttctctctc ctctctctgt cgcagagctc cgtctgaact cgcagaatcc 60  
 acgcgcagag cgaccaaga gtgtttcaga acagtccgtc catggccttg gaagctatca 120  
 actctcccac cgcggcctca gcgccgttcc agttcatgga ggagcccttg agctcccgtt 180  
 tcttgaggcc cctgaacaag cgcaagcgtt ccaagcgccc ccaccacctt ccctccgaag 240  
 atgagtaact cgccctctgc ctcatcatgc tcgcccgcag cggcgccgcc cccaagccca 300  
 accaccacgc ctgcgccgtt cctcttcttc ctctctctcc tctgcccc actaagcctg 360  
 aagaagccgc ggcgaccgcc acggcaaccg cggccccggc gaataacttg agtacaagt 420  
 gcgccgtctg cggcaagggtt ttccctctct accaggccct cggcgccacc aaggccagcc 480  
 accgcaagtc ggcgcgccgc gccgcgccgc ccgcc 515

<210> 289  
 <211> 375  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 289  
 ggcaattgct cttgtcctag ccaaacggga aatcatccgt agcataggca ctggattgga 60  
 ctggctctca ccttcggcag gttcatcgac aagtttgcct gaaattaaag gaacccttgt 120  
 catatgtcct gtggttgctg tgactcaatg ggttggtgag attaatgtct cactgcccc 180  
 aggaagcact aaggtcctag tatatcatgg agcaaataga ggaaagactg ctgatcagtt 240  
 caagaacttt gattttgttg taaccacata ttcacttggt gaaggcgagt acagaaaatt 300  
 tgtgatgcca cccaagaaga agtgcattha ttgtgggaag ttgctttaca aggagaaaat 360  
 gacagttcac cttag 375

<210> 290

<211> 590  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 290  
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 gttcgacgaa ttatcgctg atgccgcggg ccttctcgac gccagcgatg tcgatgcttc 120  
 gtctccggga tcgctgtcct cgtggatcgg cgagatcgag ggcattgctga tgaaggacga 180  
 cgaggaagcc gtcgccgtcg agccgagtca ggaggtcttc gatcgcttct tcgccggcctt 240  
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 gtccaattca tccgacggcg gcggcgggcg cgggcgcgaa cgggatgaga agctgggtcgt 360  
 cgagataaac gagctttccg aggacgctga tgatgatgat cccgtctcta agaaacagag 420  
 aaggcagctc aggaataagg atggcggggc taggtcgagg gagaggaaga gaagttacgt 480  
 gaaagagctg gagatgaaga gcaaataat ggaaggggaa tgccgcaggc tggggcggtt 540  
 gctccagtgc tttgtggctg agaatcaagc tctgcgtctg aatttgaga 590

<210> 291  
 <211> 307  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 291  
 gtgatttctga gtcagagcat gcaccttga gttcttgcaa ctgcctccca tgctgtcaca 60  
 actcaaactc tgttttagt ttattacaag ccaaggacta gtcaattcat cataagcttg 120  
 aacaaatatt tggaggctct taacaataaa ttcacagttg gaatgagatt caagatgaga 180  
 tttgaggggtg aggattctcc agagagaagg ttttctggta caattgttgg ggtggaagat 240  
 ttctcacctc aatgggataa ttcaagttgg cgatcattga aggttactg ggacgaacat 300  
 cggtcat 307

<210> 292  
 <211> 209  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 292  
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 gctcttgact gcacacaagc tgtgtggcaa taaatgggccc atgatcgctc ggctcttccc 120  
 cgcccgagcg gacaacgccg taaagaacca ctggcacgtg atcgctcgca ggaagcagag 180  
 agagcagtcc aacaacgccc gcggccgga 209

<210> 293  
 <211> 224  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 293  
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 ttgatattgt ggcagaggaa tcggttgatg tgccaatggg atcaaggagc ttctttgcgg 120  
 tcgacgagca acagcaggaa acagaagtaa atgatgcctt gcagcagctg ccacctgatg 180  
 ttgatgaaga atgtgaatct atggactcca ccaactcaaa tact 224

<210> 294  
 <211> 185  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 294  
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 gatgtctggg gaaatcccct gtgctagtat tgacagccca tctgttagga ctacatctgg 120  
 acctctgggt ccttttgata aacatgtgca ctgcgttccc tatgttgatc ccagacagcc 180  
 agttc 185



<210> 295  
 <211> 428  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 295  
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 ccaagatcca cgagtgaac atatgtgggt ccgagttcgc gtcgggtcag gccttgggcg 120  
 gccacatgag gcggcacagg tccgccccgc cgccgacggc caccagcgcc gacgcgacga 180  
 gccccaccaa cccgccggct gctgcggcca tcaccaccga gaagtccgc aacatcctct 240  
 ccttggacct gaacctgccg gccccgaacg gaggaggatc accaccacca agcgcaccgc 300  
 cgccgggaga actcgaagtt ccaattcgcc acaagtcaac agcccatcat actagcctcg 360  
 cccgccttgg tggattgcca ctactgaaaa aaaaagaaaa gacgggttca catgtcaatc 420  
 aatgtaac 428

<210> 296  
 <211> 418  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 296  
 gcagtttcgg atattaattt ggtttccaat agcacacata gttcatacga agatggggga 60  
 agcccacgga gaattacatc agaaagtgaac cctaaagatg ctccaatggg aactgagagc 120  
 cttttaagtgc cacctgaagc agtagagctt tcagatacag ggacttcctt cactgttcaag 180  
 atggattcat ctatgcaaag gaaaccacca gtagatgaaa gcccaaggat gcatccgttg 240  
 cccatgaatc taactactga agagggagat aacaatgttt cgtgccaaact aaatctatct 300  
 cttgcatctt ctctactgca agttgaccac agtcaacaat tcaatcgttt gaatgtgcta 360  
 ggttcagaaa ctagcaagtc tccagatgca aggtcaaatg ccagcatcac agaattcg 418

<210> 297  
 <211> 250  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 297  
 tgcacccaga gtataactcg agtccagtgg gttacatgga gaccaacaag gctcgtttgg 60  
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 ggcgatgatt atgatatgat gatcagtttt tctgcatta tttgaagaag ctgagggtga 180  
 ggtttcttgt cttttctttt tcctttttgt tatttttgaa gaggttttct tttctctatt 240  
 tcccccccca 250

<210> 298  
 <211> 626  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 298  
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 ccgagaggtg tttcatgtgg ttgggcgggt tccgttcacg tgaacttctc aagatactag 120  
 ggaaccacct ggagcctttg acggatcaac agttgatggg catatgtaat ctgcagcaat 180  
 cttcacaaca ggctgaagat gctttatctc agggaatgga agctctgcag caatctctcg 240  
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 tgggccaat ggctattgcg atgggaaagt tggccactct cgaaaacttc gttcaccagg 360  
 ctgacctctt gagacagcag acgctccaac agatgcacg gatattaacc acccgccaag 420  
 cagcccgcg cttctctgct atcaatgact acatctcacg tctccgagct ctaagttcat 480  
 tatggttagc tcgtcctagg actgaaaaca tctgttctgc taaactcttc tgatgtaatc 540  
 gatagttttg attgaaatta acgtttctag tggggatoca ttactgcga ctgtagcgat 600  
 tcggggccaca tttatataaa agctat 626

<210> 299

<211> 438  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 299  
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 cgaagcgctt cgggtccgatt cctcccttgc ggtcgcgcgt gtctgacgga cgagtcgttt 180  
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 gggtcgaggc ccgagctgat gcggagatgg cgctctacaa cgagctctgg caagcctgcg 300  
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 agcgggaagt gggctctcga gatccgcgag ccccgcaaga ccaccgcat ttggcttggg 360  
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 <213> Eucalyptus grandis

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 aatggagcct acaagtccc atccagtctc tgcggaaact ccaagaacaa gagtccatag 240  
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<400> 303  
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&lt;210&gt; 304

&lt;211&gt; 370

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 304

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caattccttg agattggggt tgctctcag agtggcggag gaacctgttt atgtgaatgc 360
caagcagtac 370

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&lt;210&gt; 305

&lt;211&gt; 503

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 305

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ggggctcctg gtctggctga ccggtgctcg cgagcttgag tctacaagt gcgacggggc 180
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gctggtggaa ggagctggcg gga 503

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&lt;210&gt; 306

&lt;211&gt; 377

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 306

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gacccagcgt cgaccgc 377

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&lt;210&gt; 307

&lt;211&gt; 361

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 307

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aataatctct ctctctatga caatggagtg ggtagtacac cacgccccag gtcaaagtgt 60
gaacagttaa ttttccgagc ggcattgcag gatctctctc agccaaaatc agaagaaact 120

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ctaggggaaga	cagtatcaac	tattgctctt	atacttaagg	aaagacctcc	aaccttcaaa	300
caatgtcagg	agaatccaaa	gcaggagtta	caaacttttg	atttggtatga	ggatgaaaat	360
g						361

&lt;210&gt; 308

&lt;211&gt; 357

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 308

gccctctacc	tctccccctc	cctctctccc	tctacacctc	gctctcgctt	catgatctgg	60
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tcgacgagga	attcgcgcga	atccgcgaga	tcgtcgacga	ttatccgtac	gtggccatgg	300
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&lt;210&gt; 309

&lt;211&gt; 433

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 309

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tccggtctgc	tccggcgccg	actggaggcc	atggcggtat	cggacaacga	ctcggggggc	180
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aaggaggcca	aggagaccgt	caggagtgcc	gtgtcggagt	tcataagctt	cataacgggg	360
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gggggctccg	cgg					433

&lt;210&gt; 310

&lt;211&gt; 511

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 310

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gtactgtcac	ctctgattac	cagaaagctg	aaaatgaagt	ggaactcaac	acgcttaaga	180
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agaagagcca	gaagagagat	ttagagactt	gtgaatcaag	caagaagagc	aaattgcttg	420
gttccgatgc	tgaagccacc	aaattcttga	atgaagcaat	ggatcacatg	attaaaagcc	480
caaacgttga	ttgcctgaga	atcagtgatg	a			511

&lt;210&gt; 311

&lt;211&gt; 799

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 311

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cagcagcagc tgcagcgcc 799

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&lt;210&gt; 312

&lt;211&gt; 304

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 312

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gtaccttcca tgaaaccaga atatccggtt ccaaattggaa ttggagcatc ggactttggg 60
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gattcaggtg gttctgaagc tgctgccacc agaaatggca tcacaaacct atccgtgaat 240
gctagtgtca cttacaaaagg catgggcttt ggcaaatctt tccggtttcg tgagggtctt 300
caag 304

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&lt;210&gt; 313

&lt;211&gt; 427

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 313

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ccccctctc cccttctgcc tccgccctcg atccccaaaa cctcctccg aatcgattcc 60
ggcagccccc tccggccacc gccccctccc gccgcaatgg acgcagcgcc gccggggcgc 120
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gctaataaag aatttgtgaa ggacaaaaaa catcttctca aaaacatcca ccgtagaaag 420
cccatcc 427

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&lt;210&gt; 314

&lt;211&gt; 308

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 314

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tcaagtgaag ctttgatttc tgggtggttt gaaaatgtac ctatgataag tgggtattcg 300
agtctcct 308

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&lt;210&gt; 315

&lt;211&gt; 92

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 315

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agaactggaa aggtgaatc agagtgtctt tgtccccgta atagtgggct gctggatgcg 60
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 c 181

<210> 318  
 <211> 420  
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 <213> Eucalyptus grandis

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<210> 320  
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<212> DNA  
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<210> 323  
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<210> 324

<211> 434  
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 <212> DNA  
 <213> Eucalyptus grandis

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 <213> Eucalyptus grandis

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<210> 327  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 327  
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<210> 328



<211> 673  
 <212> DNA  
 <213> Eucalyptus grandis

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 <212> DNA  
 <213> Eucalyptus grandis

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 <212> DNA  
 <213> Eucalyptus grandis

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 <212> DNA  
 <213> Eucalyptus grandis

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&lt;210&gt; 332

&lt;211&gt; 1439

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 332

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&lt;210&gt; 333

&lt;211&gt; 407

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 333

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&lt;210&gt; 334

&lt;211&gt; 307

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 334

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 <211> 402  
 <212> DNA  
 <213> Pinus radiata

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 <212> DNA  
 <213> Pinus radiata

<400> 337						
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<210> 338  
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 <212> DNA  
 <213> Pinus radiata

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aaattaagca aggctacaaa

380

&lt;210&gt; 339

&lt;211&gt; 299

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 339

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atcaagtttg	agaatcatgg	cctgacacag	gaagaagctt	tgctatcgag	ggatatgttt	180
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&lt;210&gt; 340

&lt;211&gt; 584

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 340

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&lt;210&gt; 341

&lt;211&gt; 592

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 341

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&lt;210&gt; 342

&lt;211&gt; 163

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 342

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&lt;210&gt; 343

&lt;211&gt; 372

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 343

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&lt;210&gt; 344

&lt;211&gt; 418

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 344

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&lt;210&gt; 345

&lt;211&gt; 657

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 345

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&lt;210&gt; 346

&lt;211&gt; 377

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 346

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tgttgcgaga	gtctgagggg	ggagaacaga	agattggaga	aagaagtgca	gtcgtgaga	120
gccatgaaag	tcccgcagtc	acccaattcg	atgcctctgg	cagccgccac	cctcgcaatg	180
tgtccggcct	gcgagggcct	tgcaatcaag	aaccgcggcg	ccgccacttc	ctccaccgcg	240
aagtcacaac	aatccctcct	tacaattatg	gggattgggg	atgtaaata	gatataccaa	300
aataacccaa	ccccttcaat	gggaatggga	gatgaaatga	attgaagaaa	gtgaacttaa	360
aaaaaaaaa	aaaaaaaaa					377

&lt;210&gt; 347

&lt;211&gt; 558

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 347

gaaagaagga	aagaatgggg	cgagggcgcg	tcgagctgaa	gcggatcgag	aataagatta	60
accgtcaggt	cacgttttcg	aaacgccgga	atgggtctgct	gaaaaaggcg	tatgaacttt	120
cagtgttatg	tgatgcagag	gtagcacttg	ataatattct	caagcagagg	aaaactctat	180
gagttcggaa	gcgcccggat	gctcaagact	ctggagcgat	atcaaaaatg	ttcatcacgta	240
ttgcaagacg	cgactgtatc	ggaccgggag	gcgcagaatt	ggcatcaaga	ggttggcaaa	300
ttaaaagcca	aagttgaact	tttacaacga	tcacaaaggc	acttattagg	tgaagacctg	360
ggccccctga	gtattaagga	gctgcaacaa	ctggaacgtc	aacttgaggt	tgcactgaca	420
catgttaggt	caagaaagac	tcaagtcatg	ttggaaatga	tggatgaact	acgcagaaag	480
gagcgaattt	tacaagaagt	aaacaaatct	ctgcgcaaga	agttgcagga	ggccgagggg	540
caggcattca	atgccatg					558

&lt;210&gt; 348

&lt;211&gt; 331

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 348

ctcagatata	gctaatagca	gtgagcttct	gggcagcagc	agatcagatg	gagatcaccc	60
acatcatggc	caccatgatc	agcagcagca	gcagcaggag	aatcatatgg	tgtggcagaa	120
ttcaaggctc	aaggcagatg	ttctccaaca	tccactgtat	gaccagttgt	tggctgctca	180
tgttgccctg	ttgaggattg	caactcctgt	ggatcagctt	ccaaaaatag	atgctcagtt	240
ggctcagcag	caccatgttg	tggccaagta	ctcagtccta	ggaaggaacc	agctcttgac	300
tggagaggag	aaggaggagc	ttgacagggt	c			331

&lt;210&gt; 349

&lt;211&gt; 260

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 349

acgaaattac	cttggggagt	atactggaga	gttgatttca	catcggaag	ctgataagcg	60
aggaaagatt	tatgatcgag	aagactcctc	cttccttttc	aacttgaacg	atcagtatgt	120
tcttgatgca	taccggaagg	gggataagtt	gaaatttgca	aatcattcac	caactccaaa	180
ttgctatgca	aagggtgatta	tggttgctgg	tgatcataga	gtgggtatgt	ttgcaaagga	240
acgcattgca	gccggtgagg					260

&lt;210&gt; 350

&lt;211&gt; 479

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 350

aaaatttaac	agaaacattg	caagctgctt	gtttaatttc	tgtgcttcaa	gggaaaggag	60
aggaagagat	tcccagagga	gaagatcaag	ataaatgggg	agggggaaga	ttgaaataaa	120
aatgattgag	aacgcaacaa	acaggcaagt	caccttctct	aagagaagag	ggggacttaa	180
aaagaaaagct	caggagctct	ccgtcttatg	caatgcagaa	gttgctctca	tcattttttc	240
cagcaccggc	aaactccatg	agtgggtcaag	ctcgagctca	ttcttttatgt	tacaaaaaag	300
catgaagaaa	attctcgaga	gataccagaa	atcagagcag	ggactaggac	tcatggatta	360
tcaacatcaa	cagctgttgt	gtgaaatgag	acgaatcacc	aaagaaaatg	aaagccttca	420
agagcggtta	aggcatatga	atggcgagga	agtcaattca	ttgaagctcc	cagagcttt	479

&lt;210&gt; 351

&lt;211&gt; 260

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 351

gctattttgca	gcatttcctt	ccatccgtac	ccaaaagatg	ctgacaaaca	tttactagca	60
agacagactg	gactgaccag	aagccaggtt	tcaaattggg	ttataaatgc	acgtgtccgc	120

ctttggaaac ccatggtgga agaaatgtat atggaggaac ttagagagggc cgaaacacag	180
aatcatgcag cagattcgaa ggtaacaaca gaaagtgggc aaaacaatga agaaacgggtg	240
tcaaaggaag gagctgggaa	260

<210> 352  
 <211> 176  
 <212> DNA  
 <213> Pinus radiata

<400> 352	
agggggctgg ttacagctct gtgagcggaa tagatgaaca tgcagctgga ttctgttctc	60
aacttggtgtt tgcaccaatt gatgcatctt ttgctgatga tgcctctctg gctgccctct	120
ggtttccgag taattcctct agaatctgga tcagaatgtt tctcctccaa aacgga	176

<210> 353  
 <211> 338  
 <212> DNA  
 <213> Pinus radiata

<400> 353	
ggacggaggga ggacggaggag ctggtcattt cgtcatggaa cagtttatac ctgagcaggc	60
cgtcatctct gattcgtcca tatcttcggg gaaaacagaa gtttgcagcg gtagtggagg	120
ccaatttgag ctgatccgca ggaaagaaga ggggagatgc ggccgtgcct atgctgagcc	180
ttcatttggt gtcactctc tagttacttc attacctcca cagcagcagg aaggccggat	240
ggtaacatcc ctggcagtggt atatggacag ctcatgttct tgtaaacc aa atgaagctga	300
tgccatgaga gcaaaattat ttgcgcatgt acactatc	338

<210> 354  
 <211> 405  
 <212> DNA  
 <213> Pinus radiata

<400> 354	
gggcaagggg aaagacacag atgagaaaga tgcagagcgc gaccagcagg caggttacgt	60
tttctaagcg cagaaatgga ttgatgaaga aagcttacga gctgtcgggt ctctgcgatg	120
cccaactggg actgattgtt ttctcccca gaggaaggt ctatgaattc tccagtacct	180
gcattgcagaa aatgttggca cgatacgaaa aatgttcaga aggaagtgc acgagtacat	240
caaaagagca agatgtccag tgtttaaaac gagaaagtgc gaatatggaa gaaaggattg	300
aaattcttga atccatgcaa agaaagatgt tgggcgagga gctggcatca tgtgcattga	360
aggatttgaa tcagttggag agccagggtt aacgaggtt gagaa	405

<210> 355  
 <211> 332  
 <212> DNA  
 <213> Pinus radiata

<400> 355	
tctctctggt gtggggagca ctcaaaatgg ggaagacgaa gatggagatt aaacgcattc	60
aaaaccctag ccgcccag gttactttct cgaaacgcaa gaacggattg ctaaaaaagg	120
cattcgagct ttctgttctc tgcgatgctg aagtcgccct gatcattttc tcggaaactg	180
gcaagatctg cgagtttgca agccacgacg acatggcaac aatactggaa aaatatcgaa	240
tatacacgga aacacatgga aacatggagt cctcgtcggg ccaaagcgtg aagattggtg	300
aatcacaact caaagcgtt cgtgagaaga tg	332

<210> 356  
 <211> 405  
 <212> DNA  
 <213> Pinus radiata

<400> 356	
aaactcccca aggaagcaag gcaaaagttg ttggattggt ggaccagaaa ctataagtgg	60





gagaacggga	ccagcaggca	ggttactttt	tgtaagcgca	ggaatggtct	gctgaagaaa	180
gcgtacgagc	tgctcagtgt	ttgtgatgcc	gaagtggcac	ttattgtttt	ctccccaaga	240
gggaagctgt	atgagttcgc	taatcccagc	atgcagaaaa	tggttgaacg	atacgaaaaa	300
tggttcagaag	gaagtaaccc	gacgagtaca	gcaaaagagc	aagacgtcca	gtgttta	357

&lt;210&gt; 361

&lt;211&gt; 749

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 361

gagcttcac	cgccattatt	gggtttcaat	tcgatcttga	tttgccagag	acgatgtgaa	60
ttaccattct	gtgggcaaaa	gcgagagagg	aggagaatgg	tgaggggaaa	gacccagatg	120
aaaaggatcg	agaacgacac	gagcaggcag	gttacgtttt	ctaagcgag	gaatgggtta	180
ctgaagaaag	cttatgagct	ctctgtgtct	tgcatgtccg	aagtgggact	tataattttc	240
tcaccaagag	ggaaactata	tgaattcgcc	agtcccagca	tgaggagat	tttggaaaag	300
tataaaaaac	gttcgaagga	aaatggcatg	gctcagacaa	cgaaagagca	agatactcag	360
tattccaaac	attccaaaca	aaagctcgca	aatatggaag	aacagattag	gattcttgaa	420
tcaacccaaa	gaaagatggt	gggggaaggg	ttggaatcgt	gttcaatggc	agaattaaat	480
aagttagaga	gccaaagtga	acgaggattg	agccatatac	gggctcgaaa	gacggaaaata	540
ttggttgacc	aaatagaatg	tcttaaaaag	aaggaaacgtc	tcttaagcga	ggagaacgcc	600
ttactcagta	gaaagtgggt	tgatcgtaaa	tccgtggacg	gttccggttc	aacatcatct	660
tcaattggat	tggaagcat	cgagcagatc	gaagttgaga	cacaactggt	tataagaccg	720
ccaaatgcac	aggatcactg	ttctgtaaa				749

&lt;210&gt; 362

&lt;211&gt; 670

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 362

gtttgcttgc	cgtgaaagaa	atcgaacttc	cggcgcttgg	gtgcgagaaa	tatttgcaaa	60
tcgaacttcc	ggcttggttg	caagaagctt	ttgcgttttc	ggtttcagat	taaagcaata	120
tgaggtcaga	ggaagacaaa	atatctccag	agaacaagaa	aaggagatta	aaaacccac	180
agcaggtcga	aggtctagag	agcttttatg	ctgaacataa	gtatccttcg	gaagctatga	240
aatcacagtt	atcagaagaa	ctgggattaa	cagagaagca	ggtacaagga	tggttctgtc	300
acaggaggct	taaggataaa	aggctcatga	aggaagaagc	ttccaacaat	ggaaaacaag	360
atccacacaa	tggcataatg	caagattctg	ttaatggagt	caaacaagat	tctagcggca	420
gtggaaaaaa	atctgatcac	caacgccatt	cgaggtgcaa	agaggttgaa	agtcaacgat	480
ttgcgaatgc	catggattat	cctgcagctg	tccttgcgtc	agagcttagg	gatcatgatt	540
tgttcaaagt	aaacatgat	aacgaagaca	cctttgcagg	aagtagttca	gcttcacaag	600
acagatcgtc	attacaaagt	gggaatcctt	atgaagctga	ggcaagaaga	cgccccattc	660
agaatggtaa						670

&lt;210&gt; 363

&lt;211&gt; 651

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 363

tagacctaat	tctgaggtca	atgaatctct	gctgaaaaca	ctttggcacc	actctgatgc	60
catcatgtgt	tgctccttga	aggtaaacad	gtacaatatc	atagactttc	ttctggagat	120
taattttcaag	tttgcaaat	tcttacgtta	ggctttgttt	ggtgctgtgc	agtcattgcc	180
tgttttcacc	tttgcaaatc	aggcaggcct	tgatatgtta	gaaacaaccc	tggttgccct	240
gcaagatata	tcattagaaa	agatacttga	cgacaatggc	cgcaaaagct	tttgctcaga	300
tattgctcaa	attatgcaac	agggatacgc	ctatctacct	gctggagtgt	gtgtttccag	360
catgggcagg	cctgcttcct	atgacagggc	tattgcttgg	aaggtcctca	atgatgagga	420
aaatccccat	tgcatagcat	tcattgtttat	gaattgggtc	tttgtttgac	cattattttt	480
cattgtacaa	attataccga	gtccttgaag	ttaacttatt	gaacaaaatc	tctttctggt	540
caagccttgt	gtgactggcc	aaagaaaaaa	tacagagggg	gagcatgtaa	gcagcatatt	600
tggttgctac	atttttgctt	ttaatttgaa	aaatgaattc	tggttgacaa	g	651

<210> 364  
 <211> 257  
 <212> DNA  
 <213> Pinus radiata

<400> 364  
 ccaagaatt tggcagcgc cgcagcga caacaagttc acatacaatt gcgataatca 60  
 taccttcaac taccttggtg aagatggctt cgcattattgt gttgttgagc atgaatccgt 120  
 tggaaggcaa gtaccaatgg catttctgga gcgtgttaag gaggatttta agaggagata 180  
 tgggtgggga agagctgaca cagctgttgc taacagcttg aacagagatt ttgggtcaaa 240  
 attgaaagag cacatgc 257

<210> 365  
 <211> 357  
 <212> DNA  
 <213> Pinus radiata

<400> 365  
 gtgaattcca accaaagtaa tatgcttata cttcaggaga gctgcacaga tgcattctggg 60  
 tcgttcgtaa tttatgctcc agtggatata gttgccatga atgttggtgct cagtggaggt 120  
 gatccagatt atgtggctct tctgccatct ggggttgcaa tttaccaga tgggccaaa 180  
 tgcattggcag tcaccaatc aggcattaac gacctaggca gtggaggatc tttactcact 240  
 gtggcttttc aaattttggg tgactctgtg ccaacggcta aattatccct ggggtctgtt 300  
 gcaacagtga atagtctcat ttcattgcact gtggacagga ttaaagctgc tgttact 357

<210> 366  
 <211> 309  
 <212> DNA  
 <213> Pinus radiata

<400> 366  
 attcactggg attttagcag cttttgtttc atctaaggct acagagcatc agccccctgg 60  
 tcacatgcct tcggtcacac agggctccgc catggccaac cccaatttcg tggctttgca 120  
 taataatcag ggtcatgacg gaggagcaaa tggagaccct gcgcaggcaa atttgcggtt 180  
 attcaacaat tggcagtcag ttggtagaaa tgcacagagc catgtcacag cagcaggcct 240  
 tcttcagtgg ccgactctgc ttatgggaca acacatgctt tatgatctag ctcaaggaaa 300  
 tccaggggt 309

<210> 367  
 <211> 575  
 <212> DNA  
 <213> Pinus radiata

<400> 367  
 ggaaggaaa aatggggcga gggcgcgctc agctgaagcg gatcgagaat aagattaacc 60  
 gtcagggtcac gttttcgaaa cgccggaatg gtctgctgaa aaaggcgtat gaactttcag 120  
 tggtatgtga tgcagaggta gactgataa tattctcaag cagaggaaaa ctctatgagt 180  
 tcggaagcgc cgggtatggg attgaaatct ctggactttt ttctgggatt ttgtattata 240  
 atattagagt tggagaaggc tgtgaggag agaagagagg ttgtaaagt tttccgtga 300  
 tttgttttaa aggaaaatct taaattagct aaaactttt tgcacgttca aaaggccttt 360  
 aaattttctc tccagttgag agtattttga gaaaataagc cgaatgcgcc cgggagccac 420  
 acaattgtag caagcttcag tttattttca aagcatttct ccgaataagc tagaaatgct 480  
 aagaattttg tgaatcgcta aagcatttgt aacatatagc gcagatatca aaaaaataaa 540  
 gaattttatcg gtaaaaaaaaa aaaaaaaaaa aaaaa 575

<210> 368  
 <211> 243  
 <212> DNA  
 <213> Pinus radiata

<400> 368  
 ctgagagtta agtgattggt gggagggaaa agagaaaaaa gaggagatca agaattggtga 60  
 ggggaaaaat ccagatgaag aggattgaga atacggccag caggcagggt acattttcca 120  
 agcgtagaaa tggattgctg aagaaagctt acgagctctc ggttctctgc gatgcagaag 180  
 ttggacttat gattttctcg ccaggaggaa agctctatga attcgccaat accagcatgg 240  
 aga 243

<210> 369  
 <211> 184  
 <212> DNA  
 <213> Pinus radiata

<400> 369  
 ctatgctatt acagaatgtg cctccagcac tacttgctcg cttcttgctg gaacatcgct 60  
 cagagtgggc tgattgtaac attgatgctt attcttcagc taccatgaaa gcaaatgctt 120  
 acaatgttcc aggttcactg ggaggcatta caggagtgca agttatcctt ccactggcac 180  
 atac 184

<210> 370  
 <211> 158  
 <212> DNA  
 <213> Pinus radiata

<400> 370  
 acatcccgtc ttcactttgt tgatcaacaa ttacgacaac agcgagctct tcagcagcta 60  
 ggaatgatac agcagcatgc ctggagacca caaagagggc ttccagagag ggcggtttct 120  
 attctccggg cttggctatt tgagcatttc cttcatcc 158

<210> 371  
 <211> 462  
 <212> DNA  
 <213> Pinus radiata

<400> 371  
 gcagtgggtca tatggatggg ggatccggag aggaccaaga tgccgcccgt caagatcacg 60  
 atcacgatca cgatcatgat cacgagcagc agcagacgcg gaggaaacgt taccacagac 120  
 acaactgctcg tcaaattcag gagatggaag cgttggttaa ggagtgtcca catcctgatg 180  
 acaaaacaaag gcagcgggtc agcattgaat tgggccctta agccgcggca ggtgaaattc 240  
 tggtttcaaa atcggcgtac tcagatgaag gctcaacagg atcgctcaga caacgccatt 300  
 ctccgtgcag agaattgaaa tctgcggaac gagaacgtag cactccgaga agcaattaaa 360  
 aatgggtgctt gtccaaactg cggaggggtc acatcgctgg gagagatgcc tggattcgac 420  
 gaacaccatt tccgtataga gaatacgcgc ttaaaggagg ag 462

<210> 372  
 <211> 510  
 <212> DNA  
 <213> Pinus radiata

<400> 372  
 gcaaccggag ctttaagact agaatatata tgtagccctc gggctctgac gaatactgaa 60  
 actagagata cccacctctt atctgggtgt taaggcacgc aaaatgggaa agaagaaggt 120  
 ggaggtgaaa ctcatcctc accctaccag tcgccaagga tgtttctaca accgcaagtg 180  
 cggtttgctt aaaaaagcgt ttgagctttc tgttctctgt gatgctgaag ttgcccttat 240  
 aatcttctcc caaacggca agatttacga gtttgcaagc catgacgacg tcaacgcaat 300  
 tctcgcaaaa taccggatac aaacgggaac aacaacaaac gcgatgcctt cctcgcttca 360  
 aaacaccgag cgggagacgt tgcattgagga gacaaatatg ttgggaaaaa ggaaaaaagt 420  
 ggagaagttg catgagaaga tcaatatgtt ggaaaaaaga ggaaaaaaca tggtttggtg 480  
 aaaatttggg gtcattaacg gtcaatgaat 510

<210> 373  
 <211> 466

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 373

tggatcacca	tgcagtagag	gatagggagt	taaaaaatca	tctccttcgc	aaatacagtg	60
gatattttgag	tagtctaaaa	caggaattca	tgaagaagaa	aaagaaagga	aagctcccta	120
aagatgcacg	gcaaaagtta	cttgattggg	ggagtctgca	cgacaagtgg	ccttatcctt	180
cggaacgga	gaaaatagct	ttggctgaat	gcacgggggt	ggatcaaaaa	caaataaata	240
attggtttat	aaaccaaaga	aaacgccact	ggaagccttc	tgaagatatg	cacttcatgg	300
taatgaacag	tcacagtcct	cacagtgtctg	ccttgtatgt	tgagagacat	atgatgactg	360
aagggtatct	ttagattgct	agaaagaacc	ttcggctgaa	aacagcacac	aatgctattg	420
ctttgtgtgt	atttaattgg	catggcttct	aattttaaaa	aaaaaa		466

&lt;210&gt; 374

&lt;211&gt; 573

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 374

atctctgttg	ggatctagaa	ttgagaaagg	gacgcttgtg	ggctgggtggg	ttccacaat	60
gagaggctcc	tcccgatcat	atgatgcatt	ttattctatt	tgttgatcct	gtcaatggaa	120
aaaaagagag	cagtcgaatt	tggcattgaa	atacatgac	agcaagagat	tgaaacgtag	180
cttatggacc	cccgaaggaa	tgggtggggg	gaatacgagg	taggaggtag	ccagccgaaa	240
gagctgatct	cagagaacta	ttatacaaac	acagtctgca	aaagaagaaa	tactgtgatg	300
catttttggg	tgatgcagta	aaggcagaca	cctatgaaaa	aattgtttca	ttctgagata	360
tggaacacct	gaatgcagct	gctgcccgag	cctcctcttc	gctttatgga	gttagcatgg	420
ccgagtacgg	agacgtcggc	gtcagctcaa	tgatggcgct	gatgacccaa	cacgagcctc	480
atgaaagcga	gagcacaatg	acgacgagta	tgcctagtct	attttcatcg	ttccatggcc	540
atgctgaatg	ccttctctca	gcagcaatgt	tcc			573

&lt;210&gt; 375

&lt;211&gt; 526

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 375

ggattcttgt	atttttgtgt	gttgctgctg	caacagttct	taaataccaa	gacattgatg	60
agagcttgag	taatatttct	gcaaaaaccc	aagtaaacc	tgaagctagt	ccaaactagt	120
ggaaggaaac	tcggctattc	tgtaagtcca	ctcagatttt	gagaaactct	tgggattttg	180
ctcaaaatgg	ggcgtggtaa	aatagagatc	aagaagatcg	agaacagcgt	gcacaggcag	240
gtgaccttct	gcaagcgccg	aggcggtctg	atgaagaaag	cctacgagct	ttcagtgtctg	300
tgcatgacg	atgtagcgct	cattgttttc	tcgagccgag	gaaagttgta	cgagctgggc	360
accagcaaca	acaacaacaa	cagtatgagg	tcaatattgg	aaagatatca	aaagtgttca	420
cagacggcaa	aacatatgaa	cttttcgaat	aatacttcag	acgagaaaat	gaagcaagaa	480
ataaattttac	ttaaacacaa	attgatcagc	taaacttact	aacaga		526

&lt;210&gt; 376

&lt;211&gt; 335

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 376

aaaatggcgg	cttagatgaa	ttacgagcag	agactcatcg	cagcggcacg	gctagctgac	60
aacctgaact	ccacgactgc	aaaagaattt	gatattccca	gcgctgaaga	agttgccgag	120
aaatgttcag	aatggggagt	caccgcacag	ctgaaggcac	accaggccca	aggactgtca	180
tggtgatatac	gccgatatgc	cattggcgct	aatgttatatac	ttggggacga	gatgggactt	240
gggaaaacat	tgacggctat	aagtttggtg	gcttacttga	aagatcgacg	gaaatgccca	300
gggccatttt	tggattgtg	tccattaagc	gtaat			335

&lt;210&gt; 377

&lt;211&gt; 773

<212> DNA  
<213> Pinus radiata

<400> 377  
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<211> 385  
<212> DNA  
<213> Pinus radiata

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 <213> Pinus radiata

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 <212> DNA  
 <213> Pinus radiata

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 aaaggagtaa gttctgtaga agtggagaga aaacagtata aggcaacggg gacgggatac 300  
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tcg						423

&lt;210&gt; 386

&lt;211&gt; 445

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 386

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cccacagtat	ccgagcttgt	tggga				445

&lt;210&gt; 387

&lt;211&gt; 343

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 387

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&lt;210&gt; 388

&lt;211&gt; 1193

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 388

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 <213> Pinus radiata

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 <212> DNA  
 <213> Pinus radiata

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 cgatcgctt cagaagcaag tctcgagctt gggtttacgag aatggctatt tcagacagca 300  
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 <212> DNA  
 <213> Pinus radiata

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 <212> DNA  
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 agaagcaagt gggatatact atcaaatgga ggtccaatgc aagaaatggc tcacattccg 240  
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 <212> DNA  
 <213> Pinus radiata

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&lt;210&gt; 394

&lt;211&gt; 157

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 394

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&lt;210&gt; 395

&lt;211&gt; 384

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 395

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&lt;210&gt; 396

&lt;211&gt; 694

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 396

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&lt;210&gt; 397

&lt;211&gt; 493

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 397

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&lt;210&gt; 398

&lt;211&gt; 436

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 398

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&lt;210&gt; 399

&lt;211&gt; 419

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 399

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&lt;210&gt; 400

&lt;211&gt; 690

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 400

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&lt;210&gt; 401

&lt;211&gt; 383

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 401

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&lt;210&gt; 402

&lt;211&gt; 846

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 402

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&lt;210&gt; 403

&lt;211&gt; 333

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 403

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&lt;210&gt; 404

&lt;211&gt; 881

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 404

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 aatgcaaaag caat 434

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 aataaatcgc cttgctgctc gtagtgacga agaatttttg ctctttgaga aaatggatga 240  
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 <212> DNA  
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 aagttgcggc gcgtctagat gcgcttagcc atgaatacga aaaccaacaa catcggtcga 180  
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 <212> DNA  
 <213> Pinus radiata

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 cctagccctg aaggagagaaa gagcatactt aagttagctg agcgcaggtt cacaagcttc 180  
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 <212> DNA  
 <213> Pinus radiata

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 <212> DNA  
 <213> Pinus radiata

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<210> 413  
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<210> 414  
 <211> 395  
 <212> DNA  
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aagtttaacc	cctgcaaata	ttatattgaa	gggaaatcat	ggtccaaaat	caagtcgcca	360
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<210> 415  
 <211> 413  
 <212> DNA  
 <213> Pinus radiata

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 <212> DNA  
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<210> 417  
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&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 417

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&lt;210&gt; 418

&lt;211&gt; 323

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 418

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&lt;210&gt; 419

&lt;211&gt; 1571

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 419

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<211> 339  
<212> DNA  
<213> Pinus radiata

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<210> 421  
<211> 332  
<212> DNA  
<213> Pinus radiata

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<212> DNA  
<213> Pinus radiata

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<212> DNA  
<213> Pinus radiata

<400> 423  
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 <212> DNA  
 <213> Pinus radiata

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 caacaagtcg tgactagctc ttgtgaattc ttctgatcaa gttagagatc catatactga 240  
 tatataaaag catactttca cattgcaatt ggagcagatc tagatgcaga agtgcaacct 300  
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 gatacagagt ctg 373

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 <211> 440  
 <212> DNA  
 <213> Pinus radiata

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<210> 426  
 <211> 280  
 <212> DNA  
 <213> Pinus radiata

<400> 426  
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 gtgggtcttg ccgagtacac ccaattcacg ggcaatttca caacaattgc caatcaatgc 180  
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<210> 427  
 <211> 539  
 <212> DNA  
 <213> Pinus radiata

<400> 427  
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 cttcaagatc ttttccctgg tatcatcaat cagcttggac cagagagttt tgccaatctg 360  
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<210> 428  
 <211> 1020  
 <212> DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 428

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&lt;210&gt; 429

&lt;211&gt; 246

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 429

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gtttat						246

&lt;210&gt; 430

&lt;211&gt; 323

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 430

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&lt;210&gt; 431

&lt;211&gt; 414

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 431

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&lt;210&gt; 432

<211> 525  
 <212> DNA  
 <213> Pinus radiata

<400> 432

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<210> 433  
 <211> 1196  
 <212> DNA  
 <213> Pinus radiata

<400> 433

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 <212> DNA  
 <213> Pinus radiata

<400> 434

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ttcctg						726

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 <212> DNA  
 <213> Pinus radiata

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 <212> DNA  
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 <212> DNA  
 <213> Pinus radiata

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&lt;211&gt; 351

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 438

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&lt;210&gt; 439

&lt;211&gt; 292

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 439

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&lt;210&gt; 440

&lt;211&gt; 352

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 440

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&lt;210&gt; 441

&lt;211&gt; 441

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 441

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&lt;210&gt; 442

&lt;211&gt; 1056

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 442

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gaacagcgaa cggggcgtag actctcacct cttcgcagag ttgctcatgt cgtctgggat      960
cgtcttgaat gagaacgttc gatggatcac cttccacagt ggctatgatt tcggttacct     1020
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&lt;210&gt; 443

&lt;211&gt; 367

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 443

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gagcatgctt gtcctatggc ctgtcacccc gggccctgcc ccccttgtct agtgagcgtg      60
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gggacgtcaa caaatgccgg tgttgggcct gttctatcgt gtggtcaacc atgtggacgt      180
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tgcgatatcg tagatgttgc aaagtgctat tgtggtagac aagaaagggg gatggcatgc      300
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caatgcg                                           367

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&lt;210&gt; 444

&lt;211&gt; 553

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 444

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ggtttgtcag atttggtgac gagaatgaga aaaaccgagc catgactgaa agaatgggtg      60
ttattgctct tcaagaccta tgcgaattaa tgaagctaca ccaaagaagt ccttgggatt      120
tcaacaacct tattccatga aaggtaacta ttacacacag gcataatggtg gtgcagttgc      180
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ttatggttat gct                                           553

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&lt;210&gt; 445

&lt;211&gt; 381

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 445

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gcagtatctg tctctggca aatcagctcc tttttggctt tgccaagata tggcaataac      60

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atatgcccgg	gacgaactgc	c				381

&lt;210&gt; 446

&lt;211&gt; 516

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 446

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gctgcctcca	gatgttcgtg	ttgcaagaga	tgctcaggac	ttactggtcg	agtgttgtgt	420
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&lt;210&gt; 447

&lt;211&gt; 396

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 447

gaaatatcac	tattttggct	tcagagtttc	tgcaaattgc	caaatatgga	gaatgttccc	60
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gccgcagtgt	attgtctgag	agggcgcaat	gccgaattca	acttttctgt	gcccagacatt	300
ccgactgcgt	ctcccctttc	ccgtgagcaa	attcagcatg	ccgccgccga	atatgccttg	360
ggcaaagccc	cttcagttt	tccctctttc	gcaggg			396

&lt;210&gt; 448

&lt;211&gt; 946

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 448

ggggagacga	gatctatcta	ccgccccctt	tgtattcatg	gtctcgggaa	acataacaag	60
ccctggctcg	atcagagagg	ctcagacaaa	gatagcggga	atgaattagg	ccgcaactaat	120
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acgccgctgc	tcagctcgtg	cagaagcgta	gccaccgcgt	ggcggagggtg	gttatgccc	300
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tcttgagag	cctgggtgag	cggcagcaga	ggttttctgt	ggatctgctg	gattccatgg	900
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&lt;210&gt; 449

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 aaaggcgtct ggatggagggt ccagattatt ctatttttgt gggagatttg gattcagatg 180  
 tctcagattt ggtcttgcag gagactttcc aaactcgata tccatcagtg aaagctgcta 240  
 aggttgtcat ggatgcaaac acagggcggt caaaagggtta tggatttgtg aggtttggcg 300  
 aggagagtga gagggcccga gccatgacag aatgaatgg tgtatattgt tctactagac 360  
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 gaagagcagg caatgggtgga tctcatgccc aaggattccc gtcagacaat gataaacaat 480  
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 tttggccagt atgggtgatct tgtgtccatc aaaatacctg ttggtaaagg ttgtggattt 600  
 gtccagtttg cgaacagggc ttgtgctgag gaagcattgc aaaggctcca tggactgtt 660  
 attcgtcagc aaactatacg cctttcttgg ggtcgaagcc ctgcaaacaa gcagaattct 720  
 cagccacagg ggcaacagcc tcagtctgat ccaaatcaat ggaatgggtg ttactatggg 780  
 caaggctatg aaagctatgg ttatgcccc cctcctcaag atcctgcaat gtatgcttat 840  
 ggtggctacc ctggatatgg gaactataat cagcaggtaa gctagagtta caagtctcta 900  
 aagcttggtc acactaatgt tgcaagggtc gtttatttgc ccttcaagtt ggcttcattt 960  
 gttttcagtc tggaggctgc aattgttttg ttttctttac caggtatagc aacgtatttg 1020  
 ctagtttgtt aagcacataa aaattattgc ttcattattca ggttttcatt atctgagatc 1080  
 aacatatatt ttccctagtt atattacata tttccttata attttaaaaa aaaaaaaaaa 1140

<210> 450  
 <211> 390  
 <212> DNA  
 <213> Pinus radiata

<400> 450  
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 gagaaaggta acttcagcca gctttcaaag gcaacaccta caaaaggggt gactgagaac 180  
 tcagacacag acgacaagtg atcattcggg ccagattttt gttgagagag ttgtagtgtg 240  
 taattgatcc atttcataca tttgatatgc aagcctgtat caagcttatc gataccgtcg 300  
 acctcgaggg ggggcccggg acccaattcg cctatatgtg agtcgtatta cgcgcgctca 360  
 ctggccgtcg ttttacaacg tcgtgactgg 390

<210> 451  
 <211> 460  
 <212> DNA  
 <213> Pinus radiata

<400> 451  
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 ggggaaaatg ggtttctgaa gtgaggagc cgaacaagcg gtctcgcata tggctcggct 120  
 cctattccac tcccagggcc gctgccaggg cctatgatac tgccgttttc tacctcagag 180  
 gaccctccgc gactctcaat ttccccgagg aagcacgtaa ggagcagcag agcgacctca 240  
 ggctttcgca gctcggggag ctctcaccgt cctctattca gcgagagcg gccgaggtcg 300  
 gcgcggccgt cgaccatgcc atgcaggcgg gcccggttcc tgctcagacc ctgagggaaa 360  
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<210> 452  
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 <212> DNA  
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<400> 452  
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cagcttcgca	ggccccgaa	gatggcggtc	gccggcacia	cccagaagtg	caaggcatgt	240
gaaaagacgg	tctatttggg	tgatcaattg	acagctgata	attctgtttt	tcacaaatcc	300
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tgttatgctg	ttgggcagca	aaaaaaaaaa	aaaaaa			1116

&lt;210&gt; 453

&lt;211&gt; 439

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 453

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gtgactcccc	cgcaacatgg	ttaagccctt	gccaaaacag	agcagcccga	gcggatcgga	120
aaactgcca	ataaagtcgc	ggcagttcaa	aggaatccga	ctgagaaaat	gggggaaatg	180
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ggacgcggcg	tcctcctct					439

&lt;210&gt; 454

&lt;211&gt; 481

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 454

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ttcaagcccc	ccgtctctga	acaataataa	agaggaaacc	gcgtcacccg	cgcagtcgtc	480
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&lt;210&gt; 455

&lt;211&gt; 382

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 455

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cgtgctcatc	ggaacagaat	cgcagctcag	aactctcgtg	acaaacgcaa	acagcagttc	300

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ctcgccactt cgagccgaa cc 382

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<212> DNA  
<213> Pinus radiata

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tacatgagta tatcagtcag g 201

<210> 457  
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<212> DNA  
<213> Pinus radiata

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tcaaaacact tgtaccaaatt tccgaatgcc aacatcagag aacttgattc ccattcgcct 180  
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<210> 458  
<211> 654  
<212> DNA  
<213> Pinus radiata

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tcatccattc cccacggcat tagattcaat ccattctatt aggtccttt aagcgaggtc 180  
gcgggttcga acccgatcga atgatgcgaa ttggataccg tttgggtgtag aattctgata 240  
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cgaagacgta tgatatggtg gacgacccgg ccacgaatgc tatggtgtca tggagccccg 360  
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<210> 459  
<211> 675  
<212> DNA  
<213> Pinus radiata

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<210> 460  
 <211> 1014  
 <212> DNA  
 <213> Pinus radiata

<400> 460						
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aactgttctg	taaaaattta	ccagaaatgt	tgttcaaact	gtctgtattt	agtaggtact	960
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<210> 461  
 <211> 301  
 <212> DNA  
 <213> Pinus radiata

<400> 461						
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&lt;210&gt; 464

&lt;211&gt; 1434

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 464

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&lt;211&gt; 364

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 465

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&lt;210&gt; 466

&lt;211&gt; 237

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 466

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&lt;210&gt; 467

&lt;211&gt; 578

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 467

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&lt;210&gt; 468

&lt;211&gt; 432

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 468

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&lt;210&gt; 469

&lt;211&gt; 657

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 469

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&lt;210&gt; 470

&lt;211&gt; 581

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

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 <212> DNA  
 <213> Pinus radiata

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 <213> Pinus radiata

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 <213> Pinus radiata

&lt;400&gt; 473

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&lt;211&gt; 517

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 474

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&lt;210&gt; 475

&lt;211&gt; 337

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 475

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&lt;210&gt; 476

&lt;211&gt; 362

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 476

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 <212> DNA  
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tgtgagcttt	attctctgtg	aacattctgg	gcaatgctac	tgagtctcag	accgcggaat	180
taatacagat	ggcgctgaag	gagaaactcc	tatcataaat	atataaaaag	gattttgtttt	240
tgacagtggg	acagagccag	ttcaaagcag	gcggcaatgg	caacttccaa	tccgtttgat	300
ctgctcggcg	atgacgacaa	tggcgatgtc	tcgcagctcg	tcttcgtccc	tcaggagaag	360
ccgactgtta	aaaaggcctc	tcagcctgct	caaacggcaa	cggccaagct	ccgtccaaa	420
ccctacctc	cggctcaggc	tgtgagagag	tcgagaaatg	gagtgggcag	aggaggtcga	480
ggcggggcgag	gaggagaccg	caatcaagat	gtgggctatt	agcaatcgtg	gccgtggcag	540
cttc						544



<210> 480  
 <211> 971  
 <212> DNA  
 <213> Pinus radiata

<400> 480  
 ggaagtctta ggtcacacac cggagactct tgagaagtct tcagacaagg tgtggagagg 60  
 taaaggagtg cctggtgcgg gacaggaacg cctctgcaag atgaataggg agaagcttat 120  
 gaagatggct ggtgctgttc gcactgggtg gaaggggtacc atgcgagaa agaagaagac 180  
 gattcacagg acaacaacta cagatgacaa gaaacttcaa agtactttga aaaggatagg 240  
 agtgaatgca atacctgcta ttgaagaggt caatattttc ctggaggatt ctgttattca 300  
 ttttcaaaat ccaaaagtgc aagcttcaat tgctgcta atcggtgggtg tcagtggatc 360  
 tccacaaaca aagagacttc aagatcttct tccagggatt atcaatcaac ttggggccaga 420  
 cagttttgcc aacctaaagg agcttgca gcaatttcag aaagaagttc ctcatcctgc 480  
 tgttgaagaa gatgacgat atgtgccaga acttggtgaa ggagagacat ttgaggaagc 540  
 agctaagcaa gaatccgctg cctaactgag ttgagctttt ataaacgatt gacagttaag 600  
 ggagactca ataattgtgt ttgaattgtga tattagttat aagtatattg tattttactg 660  
 ttaaagtaaa actatcaggg gcatcttggt attatgatac agttcaaatt ttgtttttcc 720  
 tttcccttg tctcataaat ttttcttcat gcaagtggat tctgtgaat gcaagattgg 780  
 tttgaattat gcaaattata gatttgtttt tgacttcgat tctgttatgg taaggtcttt 840  
 tccccctcc agtgtatggt taaaatgttg tagtacaac aatgtcccca attagctgct 900  
 tcttgcttg aattgtgcat gcgttgcaac ttttggtatt aaaatttttg cttgtctata 960  
 aaaaaaaaaa a 971

<210> 481  
 <211> 710  
 <212> DNA  
 <213> Pinus radiata

<400> 481  
 cttggagctg cctgctgaag tctttgatcg ctgtaagtct gaggttgaga ttaatcaggg 60  
 gcttggcaga tttggtatca ggtagaagct agagggctct tagtaatcga ctctgcgcag 120  
 tcccagagag aaatgaaaat gaatctcgac cttttgtaga agagtttctt atatctgacc 180  
 ccggtcagag gctatagcga atgaggaaaa tgagcggccc gagttcaata gcctgtttgc 240  
 cagagtgtgat agttccaagg atccgttggt gatgatttct attctccccg cgtagtcggt 300  
 gaacttatca ttgatcccat ggagaacaaa acagatcaaa tagtagccgg gcagaaacga 360  
 cgcagagatg aactgcagat gaccacactg gcaacgcatt gcttcaaggt ggacgatatt 420  
 gcttgccaga cttttcctgt ttcactctct gaaggtgaat gaacaatacc ctcaatcttg 480  
 tategcattg ttgatgttat gtagaagtac caagcataac catgccacac caacaccagc 540  
 accaggaacg ttttccttca caagagggaa ttagctggaa gagagatgat gaactccac 600  
 agccacagaa tccacaaaaa aagaaacggt atagaggggt aaggcaaaga ccgtggggaa 660  
 aatgggcccgc agagattcgt gatcctaaga aggcagctcg agtatggttg 710

<210> 482  
 <211> 1240  
 <212> DNA  
 <213> Pinus radiata

<400> 482  
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 cggcggagac ggcttttggg agaggatatt agctggccgc tgtaaaaagt tagtggtggt 120  
 tatggcttat gctgaaaatt tgaggaattt tggttttggg gccataatg gtggttctaa 180  
 tcagagcaat agcagtaatg ggggtgtaga tggctattct tcgatgtcca atgagggagg 240  
 gcttgttatg ggacagattg gcgtccaca tggctaccg aattcttcac caagtgtca 300  
 agatgcgcta tacgaggagc tgtggcatgc ctgtgctgga cctcttgta cgtgccag 360  
 gatcggggag cgggtgtttt atttcccaca aggtcatatg gagcaggttg aagcatccac 420  
 aaaccagggg gctgatcagc acatgccatt gtttaacctg ccctataaga tcctttgccc 480  
 cgtaataat gttcaactga aggtgaacc tgatacagat gaagtgtttt ctcaaattac 540  
 cttgctccca gaggcagagc aggatgagtc gtctgttgag aaggagcctc taacccact 600  
 gcctccaaag cctttagtat actctttctg taagaccctc actgcatcag ataccagtac 660  
 ccatggaggg ttttctgttc tcaggagaca tgctgatgaa tgtcttccac ctctggatat 720

gagtcagcaa	cctccatctc	aagatctggt	ggccaaggac	ttgcatggag	ttgaatggcg	780
gttccgacat	atcttttcg	gtcagccaag	gaggcatttg	cttaccactg	gctggagtgt	840
ctttgttagt	tctaaaagac	ttgtggcagg	agatgcattt	atctttttga	gggggtgaaaa	900
tggtgaactg	cgtgtgggag	ttaggcgtgc	catgcgccag	caaaacaatg	ttccatcatc	960
tggttatatcc	agtcacagca	tgcattcttg	tgtcattgca	actgcatcac	atgcagttac	1020
aacgaagacc	atgttttagt	tctattataa	accaaggaca	agcccatcag	agttcataat	1080
tccttatgat	caatatatgg	agtcaatgaa	aatcaatttc	tcggttgga	tgagattcaa	1140
gatgaagttt	gagggggaag	aagtcccaga	gcaaagattt	actggaacca	ttgttggaat	1200
aagtgatgct	gatcctgtga	actggccgaa	ttcaaagtgg			1240

&lt;210&gt; 483

&lt;211&gt; 516

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 483

ttcagatcta	taaatcaatg	tctgcattaa	tgacaaacta	agttgaaatt	cccaaattgtt	60
gggtggttact	atcttaggatc	ggacattagg	cgttgtggtc	tcgggttcga	ttcacaaggc	120
atcttctgttt	cggaaatttca	aagcaacacg	tatcagaaaa	ctgattctat	actgtgatga	180
cgcaggctac	taactacaca	gcaggtagca	tcagagacga	tcaagaggag	caatgtgtga	240
ggaggggacc	ttggactgtt	gatgaggaca	tgagccttat	tcgatgcgta	accacccggg	300
gtgaagggtcg	atggaacaca	gtagccaaat	ttgcagggtc	aaagagaaca	ggaaagagct	360
gcagattgag	atggcttaat	tatcttcggc	ccgatgttaa	acgtggaaac	ataacgccgg	420
aagagcagct	attaatcctt	gaactccacc	gtctctgggg	taacagatgg	tccaagattg	480
cacggcaact	cccaggcagg	actgacaacg	aatca			516

&lt;210&gt; 484

&lt;211&gt; 328

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 484

ggggaatgat	tcctggccga	ggccattcga	gcgccataca	cattgcggcg	gactgcggga	60
agtattgttt	tcagtaattc	ccttaattgg	gtcccagaat	acgttctcag	atccgaaaac	120
gggttcagtc	atcggagggt	acagcgattc	gaaggcctga	aaaccctaaa	aatacctatc	180
cccctttgtc	tttgaatggc	ggagaactat	ggcagcccgg	atagcagccc	ccggtcggag	240
aacgaatccg	gcggcggtca	catgggcggc	agcgatttct	ctgtgaaaga	gcaggatcgg	300
ttcctgccta	tagccaacgt	ggggcgca				328

&lt;210&gt; 485

&lt;211&gt; 919

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 485

gtcatccata	ttttcttttt	cagtctgcaa	tacaaattgt	tattcgagat	acgattgac	60
atgcttgaag	gctatgccta	tgcttgcgga	aacataccgt	gacagctttg	agacgacttc	120
gggaggtagc	agcgtggatc	tggttagaat	ggctctacca	ggtttggccc	ctaatttgtc	180
ttctgcttca	gtttcagctt	cagcgtcggg	agattctgcc	aagaaaataa	ggaaacccta	240
taccatcacc	aagtccagag	agagctggtc	tgagcaagag	cacgataaat	ttctcgaagc	300
ccttcaacta	tttgatcgtg	attggaaaaa	gattgaagct	ttttaggat	caaagactgt	360
catacagatt	cggagtcag	cacaaaagta	cttcttgaag	gtccaaaaga	atggcacaag	420
agaacatgta	ccacctcctc	gtccaaaacg	caaagcatct	catccatacc	cacagaaggc	480
ctcaaaaaat	gttcctgtgt	cacagcaagt	atcaactgct	tttccaactg	ctgctactca	540
actagattct	ggatattatc	caagggcaga	gtcgtcttcc	atactcacca	aatctggctc	600
gtcatgcccc	actgtttctt	cctgggttca	tcataccata	ccatcaatag	atgcttcggt	660
tgtggaaaaa	gatgatgggt	ggcctccagg	cattgaaaca	gggaataatt	gcagtagtgg	720
tagcactgag	agttctcctc	ctacgtggcc	accctgttct	gaaatccctg	agaaagtcaa	780
accagatttt	tcacaagttt	ataagttcat	tggcagtgct	tttgaccoga	gcacaactga	840
tcacttgaag	aagcttaagg	aatggatcca	attgatcttg	aaactgtgtt	gtacccatga	900
ggaacctttc	cacaacttg					919

<210> 486  
 <211> 359  
 <212> DNA  
 <213> Pinus radiata

<400> 486  
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 agttgttgga gctgttcaaa agataatggc cacgagcgtc ttaatcgtgg atcttgagg 120  
 gctgaggagg atacaatttt gagtgaacat atcaaaactc atggagttgg tcgatggaca 180  
 tctcttccca agaaagcagg tctaaaacga tctgggaaga gttgcagatt acgttggttt 240  
 aactatcttc gttcagatat caagcatgga aacatttctc cggaagaaga ggaactcctc 300  
 atcagattac atcgtctcct tggcaatcgt tggtcgttga tagcaggacg acttccagg 359

<210> 487  
 <211> 438  
 <212> DNA  
 <213> Pinus radiata

<400> 487  
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 tttgaagggg gtcgcagcag aagaagatcg gattcgttca tctcatcac aaagaatata 120  
 ccatgggggt cattacccat gtaaaagaaa agtaagagat ggatcgggat aagcttatga 180  
 agatggctgg tgcagttcgt actggtggaa agggtagagt acgcagaaaag aagaaagcag 240  
 ttcacagagc cacaacaaca gatgacaaaa ggctccaaag taccttgaag aggttaggag 300  
 tgaatactat tctgtctatt gaagaagtaa atattttcaa ggatgagatg gtcattcatt 360  
 ttataaacc cccagacaaa aaattttac 438

<210> 488  
 <211> 478  
 <212> DNA  
 <213> Pinus radiata

<400> 488  
 agaatttagg tagggtttta aggaagaaag acgatccaag cagtgggttt ttatcgagct 60  
 cccacgcagt ttgaaggggt tgcgcagcaga agaagatcgg attcgttcat cctcatcaca 120  
 aaagatggat cgggataagc ttatgaagat ggctggtgca gttcgtactg gtggaaaggg 180  
 tacagtacgc agaaagaaga aagcagttca cagagccaca acaacagatg acaaaaaggc 240  
 ccaaagtacc ttgaagagggt taggagtgaa tactattcct gctattgaag aagtaaatat 300  
 tttcaaggat gagatgggtc ttcattttat aaacccaaaa gttcaagcct ctattaatgc 360  
 caatacatgg gtggtcagtg gatctcccca gacaaaaaat ttacaagatc tccttcccgg 420  
 aatcatcaat cagcttggac ctgataattt gattaatttg aagaagattg cccaacag 478

<210> 489  
 <211> 608  
 <212> DNA  
 <213> Pinus radiata

<400> 489  
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 ggctctgggt ttaaagttct gaattaaacg ggctttggct aaaaagtaaa aaacggttgg 120  
 aatttgagca ggaggagctg atagagtgtt attatcggga cggatgaaat aattgaagcc 180  
 aaaggggctt atgtgtgtgt tttcgggact tctgcagta aggggaaatg gaattattgg 240  
 agtgaagtag gtgttcttgg agaaatatgc gggcagctca taataacagc aataatagt 300  
 agaaatcttg cgtgttgaga tctctctgag cttcgtttt cagaatgagg accggcttct 360  
 cccagcagca tcgggaaggg gaaaagagga gtctcaattc agagctatgg catgcatgtg 420  
 ctgggccact tgtgtcccta cctgctgttg ggagccgtgt tgtatatattt cctcaaggctc 480  
 acagtgagca ggtggctgcc tcaacaaaca agaggttgat gctcacattc ctaactatcc 540  
 aaatcttcca ccacaattaa tctgccacta cacaatgtta ctctgcaggc agatgtggag 600  
 acagatga 608

<210> 490  
 <211> 331  
 <212> DNA  
 <213> Pinus radiata

<400> 490  
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 agtaagctat agattgatag ttcagagaaa agactgaaag gcaaaaacta tatagacata 120  
 acaacggaga gagcagcaca ggaaccaggt tgcataatgg ctaggcctca aagatacaga 180  
 ggagtccgctc agaggcactg gggatcatgg gtctctgaaa tccgccatcc cttattgaag 240  
 accagaatat ggctaggaac atttgaaaca gcagaggatg cagcacgagc atatgatgaa 300  
 gctgcaagga tgatgtgtgg gccgagagct a 331

<210> 491  
 <211> 431  
 <212> DNA  
 <213> Pinus radiata

<400> 491  
 ccgctatcct ttccattaca tcccacgtta ggtcacgggtt tcgaaccctt gcacggccat 60  
 tcttctgtta agatggtgag atctccctgc tgcgacaagg ttcataccaa taacaaaggc 120  
 gcctggacca aagaagaaga cgagcgtctc atagcacaca ttgaagccca cggcgagggc 180  
 tcatggcggtt ctcttcccaa ggccgcaggg ctgctgcatg gtgggaagag ctgcaggttg 240  
 cgatggataa actacctgctg tcttgatctg aaacgcggaa gcttttcaga agaagaagac 300  
 gatctcatca tcaaaactcca ctccctcctc ggcaacaagt ggtcgcttat tgcagggaga 360  
 ttgcagggcg aacggacaac gaaaataaaa aattactgga acacgcacat gaaaaggaaa 420  
 ttgttgagca g 431

<210> 492  
 <211> 469  
 <212> DNA  
 <213> Pinus radiata

<400> 492  
 gccagagctg tggctgttcc cagaagagga tatcatcagc tgtccagttt gtcttaagag 60  
 actacagaag aagaatatag aagatgggta gatccccctg cccccaaaaa gaagcgctta 120  
 accgtggggc ttggacaggc atggaggata cgattctcac cgagtacatt cgagttcatg 180  
 gcagtgggtgg ctggaaagat atctccaaaa gagcagggtct taagagggtg gcaaagagtt 240  
 gcagattgctg ttggctgaac tatcttcgtc ccgatattaa acgtggtaac atttctcccg 300  
 aggaagaaga gctcattatt cggttgcatc gccttcttgg aaatcggtgg tctctgatag 360  
 caggacgact gcctggtcga acagacaacg aaatcaagaa ttactggaac actcatatga 420  
 gcaagaagcc atggctgtca atggacgaat ctcagtccaa tacttcgca 469

<210> 493  
 <211> 380  
 <212> DNA  
 <213> Pinus radiata

<400> 493  
 gaggaggagg acgaggagga ggctgggaag gagctggagg cgtgggagag agcatacgtc 60  
 gacgaaaggt catgggaaac cttgcaggag gacgaggagg gtcttctcaa ctttgacaag 120  
 aaacagcagc aacagcaaca gcgccaatac agacgccgctc tgcagtctgc tgcagccgctg 180  
 gcttcaaaaca ttcagcgagg attgatccgt tatctctaca tcatcatcga cttctctcgg 240  
 gcggcagcag agaaggattt caaaccaaat cgaatggtgg tggttgcaaa ttgtgtcgag 300  
 gcatttgtga gagaattctt tgatcagaat ccactaagtc agctgggtat tgttattata 360  
 aaaaatggcg ttgcacatcg 380

<210> 494  
 <211> 420  
 <212> DNA

## &lt;213&gt; Pinus radiata

## &lt;400&gt; 494

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atgaagcact	cggtgcata	attcaagccc	atggagaagg	cagttggcgt	tcccttccca	120
agggcgctgg	gttgacgag	tgtggcaaaa	gctgcaggct	tagatggata	aattatctcc	180
gtcctgacct	caaacggggc	aatttcagcc	cagaagaaga	tgagatcatt	atcaaacttc	240
attctatgtt	gggtaacaag	tggcttttga	tgcgaagcaa	attgccaggg	cgaacagata	300
atgagataaa	gaattactgg	aacactcaca	ttaagagaaa	aatgttagaa	aggggtctag	360
atccttctac	ccatctccct	ttaatgtcag	accatggctc	ttttgagtcc	tccagcaaga	420

## &lt;210&gt; 495

## &lt;211&gt; 568

## &lt;212&gt; DNA

## &lt;213&gt; Pinus radiata

## &lt;400&gt; 495

aaaagttgtt	cctccactgg	atttcactca	gcagccacct	gcccaggagc	tgactgccag	60
ggatcttcat	gacaatgaat	ggaaatttcg	gcataatttt	cggggtcagc	ctaagaggca	120
tctgctcaca	acaggatgga	gtgtttttgt	cagtgcgaag	agactgcag	ctggtgattc	180
tgtgctcttt	atttgggaatg	agaaaggaca	actgttggtg	ggaattagac	gagcaaacag	240
gccacaggct	gtaatgccct	cattgggtact	ctcgagtgat	agcatgcata	tagggctcct	300
tgtgctggct	gctcatgctg	ctgctacaaa	tagtcgattt	actattttct	ataatccaag	360
ggcaagtcca	tctgaatttg	tcatacctct	ggcaaagtat	gttaaagcag	tttatcatac	420
tctgttttct	ataggaatgc	gtttttagaat	gctatttgag	acagaagagt	cgagtgttcg	480
cagatatatg	ggcaccataa	ctggcataag	tgacttggat	caggttcgat	ggccaaattc	540
acattggcgt	tctgttaagg	ttgggttg				568

## &lt;210&gt; 496

## &lt;211&gt; 396

## &lt;212&gt; DNA

## &lt;213&gt; Pinus radiata

## &lt;400&gt; 496

tgggagtttg	ctaattgattg	tttccggaaa	ggagaaaagc	agctgctctg	cgaaattcat	60
agaagaaaaa	gcgtccagca	atcttcagca	gcccctgcta	gcagatgcgt	ttcgccggtc	120
aattctgttg	aagagcaggc	attgtcttcg	acctcctccc	ctgtttcttc	tcacgcagag	180
gcggcgtag	ttaattgttg	tcaaaatagc	acatccgggc	tccatggtga	aaatgaaaaa	240
ctcagaaaaa	ataatttgct	tctcatgtca	gagctggcac	aaatgaagaa	acagtgaac	300
gatctcctcc	tgtttctgtc	aaagtgtgta	aacattaccc	cggacaacct	cagcaatatc	360
ctgatagccg	cttctcaaac	gaattgcccg	gatgaa			396

## &lt;210&gt; 497

## &lt;211&gt; 643

## &lt;212&gt; DNA

## &lt;213&gt; Pinus radiata

## &lt;400&gt; 497

cggaagtgg	ggagtgccgg	acaatttgta	tggagctcag	gaagacagtg	gtggaagtag	60
tgtaaacag	aagaacttga	aggatgggga	ccaattcacc	agtagtgatg	aagctgacag	120
tgaggtcaat	gaattcaaca	ttatgaaaag	aagcaattca	ggggttgat	atgaagataa	180
caaaagaagt	ggggggcaag	gtgatggcaa	tcagtacagg	tcacgtcact	ctcggagcat	240
ctccatggat	agcattatga	gtaagatgca	taacttcagt	gaagacttgg	aacagggaacc	300
gtctcaaggt	cggaatgtca	gacactccca	tagcaattcg	atggatggaa	gtacaaaattt	360
caatgtggaa	ttcgggaatg	gggaattcag	tgcactctgag	atgaagaaga	tcattggccag	420
tgagaaactg	gcagagcttg	caacgggtgga	tccaaaacgt	gtcaaaaagg	tattggctaa	480
tcgccagtgc	gctgcacgct	ccaaggaaag	aaagatgcgc	tatatctcag	agctgggaacg	540
caaagtccag	accttgcaaa	ctgaggcaac	aactttgtcc	gcacagctga	ctcttttgca	600
gagggatcaa	ctggactggg	cagtcagaac	cacgagctca	agt		643

## &lt;210&gt; 498

<211> 328  
 <212> DNA  
 <213> Pinus radiata

<400> 498  
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 aatatttttg ttgtaggctg aggcggcacg aatccgggtc aactgaggat acattctgga 120  
 ggtatagtgt ggagaaggca ggggtggaggc aaggtgggtt atgtggcgaa aaacgaagtc 180  
 aagagtttga gttggactcg agttcccagg ggttatcaac tcggtgtcaa gcttaaagct 240  
 gggttgaaca tcaagcttgc gggatttcgt gaacaggatg tcggcaattt gacaaatttc 300  
 atgacaaaca caataggatt agtcccca 328

<210> 499  
 <211> 372  
 <212> DNA  
 <213> Pinus radiata

<400> 499  
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 tgggtggagag agcagtcctc attctgacat agagtctacc ggcatccaca ataattgcatc 120  
 ttctttcttc tcacaatcca tcatacgaga gcaagaccgg ctgcttccca tagccaatgt 180  
 gggggcgcatc atgaagaaaa ccctcccaac caacgccaaag atctccaagg aagccaaggga 240  
 aatcatgcaa gaatgcgtct ccgagttcat tagctttgtt actggagaag catccgacaa 300  
 gtgtcacaag gaaaagcgca agaccatcaa cggcgatgac atactatggg ccatgaccac 360  
 tctcggattc ga 372

<210> 500  
 <211> 344  
 <212> DNA  
 <213> Pinus radiata

<400> 500  
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 gaaaataatg aacttaggag atgcacatgg caccagtggg gttgctgccg ttctcgagaa 120  
 ttcggatgat gaagctgtgg atccacatct tgaacgtatc aaaagtgcac gtgaaggcgg 180  
 tgctggagaa gatagtgatg aagaggcatg ctacactggg gacttatctc tgatatgtgc 240  
 tgtagtcaaa gaactaatat gcacacatga ttaacaagag ttaaatcaag agactgatgt 300  
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 <212> DNA  
 <213> Pinus radiata

<400> 501  
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 gaggaggcta atgaagcagg cagtgaattc caggcacaat tttgctgcag cccacattgc 180  
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 aacagcatct catcgccatc ccatgaaatt ccatcctcct cctccgcctc cgccgcgcgc 360  
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&lt;210&gt; 503

&lt;211&gt; 416

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 503

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&lt;210&gt; 504

&lt;211&gt; 1206

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 504

gccgaaactc	gaatcgatat	gctttgtggc	cggttcaaat	atttgagctg	gcttagcttc	60
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accagc						1206

&lt;210&gt; 505

&lt;211&gt; 386

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 505

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<210> 506  
 <211> 408  
 <212> DNA  
 <213> Pinus radiata

<400> 506						
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atggccaagaa	tcaaagtgga	gatcacttaa	gggccagtgg	gatgaaacat	cagtgggtccc	180
gcgaccagag	agggtttcac	catgggaaat	tgagacgttt	gtagcttcat	ctgcagcact	240
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ggaattaatg	atacatggat	cgggcaaaac	agcaacagat	tcttcacagg	tacacagatt	360
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 <212> DNA  
 <213> Pinus radiata

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gtagagaatc	gggggacatg	atttattcat	gcgccagaat	ttcacgattc	ctcatcgaat	180
tagtcatgca	atgtttgtgc	aggtggtctc	tgatagcagg	acgactgcct	ggtcgaacag	240
acaacgaaat	caagaattac	tggaacactc	atatgagcaa	gaagccatgg	ctgtcaatgg	300
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<210> 508  
 <211> 395  
 <212> DNA  
 <213> Pinus radiata

<400> 508						
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 <212> DNA  
 <213> Pinus radiata

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accagaagga	catactgcgc	aggctgggag	ttcttcaggt	tctgaagtgc	tgcaatctga	180
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agttactagc	attgcacagt	catctgaaaa	tggtacaact	tatcaatatt	ctcatactaa	300
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cacgtgcttg	gttctccgtg	tcacattgac	tataaagata	ggtctcaatg	agtgcgaaga	540
tcataaaatg	aaacagattt	tataaagtct	tcgcaatttt	atggttcaga	ggccattatc	600



agtaaaacag gcaacccgtg atggtttgtt tttgaatggg ttgcagtttg cacaaaca 658

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<211> 351  
<212> DNA  
<213> Pinus radiata

<400> 510  
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gcgcttaacc gtggggcttg gacaggcatg gaggatacga ttctcaccga gtacattcga 180  
gttcatggca gtgggtggctg gaaagctatc tccaaaagag caggtgagtg tcaataaaaa 240  
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<210> 511  
<211> 754  
<212> DNA  
<213> Pinus radiata

<400> 511  
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aaggctgaag atggagtgtt atatcctctt gaaaaaagct ttttcttctt gcctaaaccc 120  
ccgacactta ttcttcacga ggagattgaa tatcttgagt ttgagagaca tggagctgct 180  
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gtgcagaggt caagcaacct gcaaagaaag aagtaaagaa aaaaaaggcg gtggctccca 600  
aggcaaccga gaccaagaag aagaagaagg gatgacgagg aagagggagg aaagaaaaag 660  
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<210> 512  
<211> 424  
<212> DNA  
<213> Pinus radiata

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cagagcagag aacagtcata tgctaacaaa attcaacatt gcttcacaga aatacatgca 420  
gctg 424

<210> 513  
<211> 487  
<212> DNA  
<213> Pinus radiata

<400> 513  
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<210> 514  
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 <212> DNA  
 <213> Pinus radiata

<400> 514						
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tagatctata	ccaacgcctg	ttctcatgaa	aacctaccgg	cttgctgcag	atccgagcct	420
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gcagctgaat	acatacggat	ttcgaaagat	tgtgccagac	agatgggagt	tcgccaacga	600
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<210> 515  
 <211> 315  
 <212> DNA  
 <213> Pinus radiata

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gcattgcatg	gcgagattgt	atltgtgtta	gaagttgatt	ttctgttttt	tctcttttcag	180
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<210> 516  
 <211> 563  
 <212> DNA  
 <213> Pinus radiata

<400> 516						
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<210> 517  
 <211> 392  
 <212> DNA  
 <213> Pinus radiata

<400> 517						
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&lt;210&gt; 518

&lt;211&gt; 319

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 518

tttaagcatt	tcattgagtc	ttaggtcacg	gtttccaatc	ctggcaggtc	tcattattct	60
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&lt;210&gt; 519

&lt;211&gt; 513

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 519

accgtcgaga	gagcttcata	tctaaccaat	acataacacc	tgtatggctt	catagcttca	60
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&lt;210&gt; 520

&lt;211&gt; 219

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 520

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caagcgtgga	aatttcacag	aagaagaaga	cgatcttata	atcaaactgc	actcactcct	180
cggcaacaag	tggtctctaa	ttgcagggag	attgccagg			219

&lt;210&gt; 521

&lt;211&gt; 392

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 521

cttagcgacg	gttcccaatc	cctagtcctc	gcactttact	cgtctctctg	tgaagatgag	60
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cctcttgggc	gataagtgg	ctcttatcgc	gggtcgattg	ccggggccgga	tggaaagacca	360
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&lt;210&gt; 522

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 <212> DNA  
 <213> Pinus radiata

<400> 522  
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<210> 523  
 <211> 822  
 <212> DNA  
 <213> Pinus radiata

<400> 523  
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 cggatgatat ggggcttggt aagacgctgt cattgctttc gtcatttgca acgaaccgtc 780  
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 <212> DNA  
 <213> Pinus radiata

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 <211> 361  
 <212> DNA  
 <213> Pinus radiata

<400> 527  
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 <211> 337  
 <212> DNA  
 <213> Pinus radiata

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 <212> DNA  
 <213> Pinus radiata

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 <212> DNA  
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atggcagatg	tggggtcctc	gggtggagaa	gcagttgcat	tgtttgagga	catttgctatc	360
cttactccaa	gaggtcgtta	cactattgag	ctccatctat	ctttcatgcg	gcttcaaggg	420
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 <211> 374  
 <212> DNA  
 <213> Pinus radiata

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 <211> 487  
 <212> DNA  
 <213> Pinus radiata

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 <212> DNA  
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agtcttggga	tctgcaattc	caattgataa	ttcaatgcaa	tactctaattg	cattcaccaa	780
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 <212> DNA  
 <213> Pinus radiata

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 <212> DNA  
 <213> Pinus radiata

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&lt;210&gt; 539

&lt;211&gt; 350

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 539

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&lt;210&gt; 540

&lt;211&gt; 479

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 540

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&lt;210&gt; 541

&lt;211&gt; 580

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 541

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&lt;210&gt; 542

&lt;211&gt; 445

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 542



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&lt;210&gt; 543

&lt;211&gt; 682

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 543

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&lt;210&gt; 544

&lt;211&gt; 372

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 544

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&lt;210&gt; 545

&lt;211&gt; 444

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 545

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&lt;210&gt; 546

&lt;211&gt; 570

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 546

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&lt;210&gt; 547

&lt;211&gt; 532

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 547

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&lt;210&gt; 548

&lt;211&gt; 447

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 548

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&lt;210&gt; 549

&lt;211&gt; 1163

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 549

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&lt;210&gt; 550

&lt;211&gt; 545

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 550

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&lt;210&gt; 551

&lt;211&gt; 353

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 551

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&lt;210&gt; 552

&lt;211&gt; 448

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 552

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gagctgtcaa	gtcgctttac	gagtacgg				448

&lt;210&gt; 553

&lt;211&gt; 883

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 553

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&lt;210&gt; 554

&lt;211&gt; 310

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 554

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tcaccatcat						310

&lt;210&gt; 555

&lt;211&gt; 463

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 555

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&lt;210&gt; 556

&lt;211&gt; 496

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 556

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 aaaatccgcc agaggaacca gagaaatgac cttaaataat attcaaacag gccttccagg 600  
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<210> 559  
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 <212> DNA  
 <213> Pinus radiata

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 <212> DNA  
 <213> Pinus radiata

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<210> 561  
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 <212> DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 561

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&lt;210&gt; 562

&lt;211&gt; 440

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 562

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&lt;210&gt; 563

&lt;211&gt; 359

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 563

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&lt;210&gt; 564

&lt;211&gt; 249

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 564

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&lt;210&gt; 565

&lt;211&gt; 542

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 565

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ct						542

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 <212> DNA  
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<210> 567  
 <211> 722  
 <212> DNA  
 <213> Pinus radiata

<400> 567						
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<210> 568  
 <211> 489  
 <212> DNA  
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<400> 568						
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<400> 569

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&lt;211&gt; 447

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 570

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&lt;210&gt; 571

&lt;211&gt; 146

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 571

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&lt;210&gt; 572

&lt;211&gt; 767

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 572

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&lt;210&gt; 573

&lt;211&gt; 445

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 573



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&lt;210&gt; 574

&lt;211&gt; 731

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 574

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&lt;210&gt; 575

&lt;211&gt; 441

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 575

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&lt;210&gt; 576

&lt;211&gt; 271

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 576

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&lt;210&gt; 577

&lt;211&gt; 315

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 577

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&lt;210&gt; 578

&lt;211&gt; 384

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 578

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&lt;210&gt; 579

&lt;211&gt; 434

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 579

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&lt;210&gt; 580

&lt;211&gt; 322

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 580

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&lt;210&gt; 581

&lt;211&gt; 448

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 581

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 <213> Pinus radiata

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&lt;210&gt; 586

&lt;211&gt; 349

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 586

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&lt;210&gt; 587

&lt;211&gt; 368

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 587

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&lt;211&gt; 516

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 588

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&lt;211&gt; 340

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 589

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 Gln Leu Asn Leu Met Pro Ser Leu Val Pro Ser Ser Ala Ser Ser Ala  
 35 40 45  
 Gln Ser Gly Phe Asn Leu Gln Lys Arg Ser Cys Asn Asp Ala Phe Pro  
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 Ser Ser Ser Asp Arg Asn Ser Glu Ala Arg Ser Phe Leu Arg Gly Ile  
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 Asp Val Asn Arg Glu Pro Ser Ala Gly Ala Ala Asp Tyr  
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 <213> Eucalyptus grandis

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 35 40 45  
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 Trp Lys Glu Met Phe Pro Cys Met Ile Ser Lys Ala Ala Thr Val Asp  
 65 70 75 80  
 Val Val Cys Ser Gly Glu Gly Pro Asn Arg Asn Gly Ala Val Gln Leu  
 85 90 95  
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 130 135 140  
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 145 150 155 160  
 Ser Asn Gly His Cys Lys Val Ile Trp Val Glu His Leu Glu Cys Gln  
 165 170 175  
 Lys Thr Thr Val His Pro Met Tyr Arg Thr Ile Val Asn Ser Gly Leu  
 180 185 190  
 Ala Phe Gly Ala Arg His Trp Met Thr Thr Leu Gln Val Gln Cys Glu  
 195 200 205  
 Arg Leu Val Phe Phe Met Ala Thr Asn Val Pro Thr Lys Asp Ser Asn  
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 Gly Val Ala Thr Leu Ala Gly Arg Lys Ser Ile Leu Arg Leu Ala Gln  
 225 230 235 240  
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 245 250 255  
 Ser Trp Thr Lys Val Pro Thr Lys Thr Gly Glu Asp Ile Arg Val Ala  
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 <213> Eucalyptus grandis

<400> 596  
 Gln Asn Gly Pro Ser Met Pro Pro Val Gln Pro Phe Val Arg Ala Glu  
 1 5 10 15  
 Met Leu Pro Ser Gly Tyr Leu Val Arg Pro Cys Glu Gly Gly Gly Ser  
 20 25 30  
 Ile Ile Arg Ile Val Asp His Leu Asp Leu Glu Pro Trp Ser Val Pro  
 35 40 45  
 Glu Val Leu Arg Pro Leu Tyr Glu Ser Ser Thr Met Leu Ala Gln Lys  
 50 55 60  
 Thr Thr Met Ala Ala Leu Arg Gln Leu Arg Gln Ile Ala Gln Glu Val  
 65 70 75 80  
 Ser Gln Pro Asn Val Ser Gly Trp Gly Arg Arg Pro Ala Ala Leu Arg  
 85 90 95  
 Ala Leu Ser Gln Arg Leu Ser Arg Gly Phe Asn Glu Ala Leu Asn Gly  
 100 105 110  
 Phe Thr Asp Glu Gly Trp Ser Ile Met Gly Asn Asp Gly Ile Asp Asp  
 115 120 125  
 Val Thr Ile Leu Val Asn Ser Ser Pro Asp Lys Leu Met Gly Leu Asn  
 130 135 140  
 Leu Ser Phe Ser Asn Gly Phe Pro Ala Val Ser Asn Ala Val Leu Cys  
 145 150 155 160  
 Ala Arg Ala Ser Met Leu Leu Gln Asn Val Pro Pro Ala Val Leu Leu  
 165 170 175  
 Arg Phe Leu Arg Glu His Arg Ser Glu Trp Ala Asp Asn Ser Ile Asp  
 180 185 190  
 Ala Tyr Ser Ala Ala Ala Val Lys Val Gly Ser Cys Ala Leu Pro Gly  
 195 200 205  
 Ser Arg Ile Gly Ser Phe Gly Gly Gln Val Ile Leu Pro Leu Ala His  
 210 215 220  
 Thr Ile Glu His Glu Glu Phe Leu Glu Val Ile Lys Leu Glu Gly Met  
 225 230 235 240  
 Gly His Ser Pro Glu Asp Ala Leu Met Pro Arg Asp Ile Phe Phe Leu  
 245 250 255  
 Gln Met Cys Ser Gly Val Asp  
 260

<210> 597  
 <211> 134  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 597  
 Cys Pro Ile Asp Ser Gly Arg Ser Phe Asp Thr Ser Leu Ser Leu Gly  
 1 5 10 15  
 Leu Gly Cys Tyr Gly Asp Pro Glu Asp His Glu Ile Lys Ile Lys Lys  
 20 25 30  
 Pro Leu Ala Lys Leu Ser Gly Asn Ser Thr Cys Leu Thr Ile Gly Leu  
 35 40 45  
 Pro Gly Gly Glu Ala Cys Gly Leu Gly Ser Ala Ser Gly Asp Glu Val  
 50 55 60  
 Arg Asn Ile Pro Ser Arg Ser Ala Ser Ser Phe Ser Asn Ser Ser Ser  
 65 70 75 80  
 Ala Lys Arg Glu Lys Ala Glu Gln Gly Glu Glu Glu Ala Val Glu Arg  
 85 90 95  
 Gly Thr Gly Ser Pro Arg Ala Thr Ile Asn Ile Glu Asp Glu Asp Glu  
 100 105 110  
 Phe Ser Pro Arg Lys Lys Leu Arg Leu Ser Lys Ala Gln Ser Ser Ile  
 115 120 125  
 Leu Glu Glu Met Leu Gln  
 130

<210> 598  
 <211> 220  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 598  
 Met Gly Gln Gln Ser Leu Ile Tyr Ser Phe Val Ala Arg Gly Thr Val  
 1 5 10 15  
 Ile Leu Ala Asp Tyr Thr Glu Phe Thr Gly Asn Phe Thr Ser Val Ala  
 20 25 30  
 Phe Gln Cys Leu Gln Lys Leu Pro Ala Thr Asn Asn Lys Phe Thr Tyr  
 35 40 45  
 Ser Cys Asp Gly His Thr Phe Asn Phe Leu Val Asp Asp Gly Phe Thr  
 50 55 60  
 Tyr Cys Val Val Ala Val Glu Ser Val Gly Arg Gln Val Pro Ile Ala  
 65 70 75 80  
 Phe Leu Glu Arg Val Lys Asp Asp Phe Thr Lys Arg Tyr Gly Gly Gly  
 85 90 95  
 Lys Ala Ala Thr Ala Val Ala Lys Ser Leu Asn Lys Glu Phe Gly Ser  
 100 105 110  
 Lys Leu Lys Glu Gln Met Gln Tyr Cys Val Asp His Pro Glu Glu Ile  
 115 120 125  
 Ser Lys Leu Ala Lys Val Lys Ala Gln Val Ser Glu Val Lys Gly Val  
 130 135 140  
 Met Met Glu Asn Ile Glu Lys Val Leu Asp Arg Gly Glu Lys Ile Glu  
 145 150 155 160  
 Leu Leu Val Asp Lys Thr Glu Asn Leu Arg Ser Gln Ala Gln Asp Phe  
 165 170 175  
 Arg Gln Gln Gly Thr Gln Ile Arg Arg Lys Met Trp Leu Gln Asn Met  
 180 185 190  
 Lys Ile Lys Leu Ile Val Leu Gly Ile Leu Ile Ala Leu Ile Leu Ile  
 195 200 205  
 Ile Val Leu Ser Ile Cys Gly Asn Gly Lys Cys Lys  
 210 215 220

<210> 599  
 <211> 149  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 599  
 Glu Glu Lys Lys Glu Glu Pro Pro Ala Pro Ile Thr Val Val Leu Lys  
 1 5 10 15  
 Val Gly Met His Cys Glu Ala Cys Thr Arg Val Leu Arg Lys Arg Ile  
 20 25 30  
 Arg Lys Ile Lys Gly Val Glu Thr Val Glu Thr Asp Val Val Asn Asp  
 35 40 45  
 Arg Val Ile Val Lys Gly Val Val Asp Pro Pro Lys Leu Val Ala Tyr  
 50 55 60  
 Val Lys Lys Arg Thr Gly Lys Gln Ala Ser Ile Val Lys Glu Glu Glu  
 65 70 75 80  
 Lys Lys Glu Glu Glu Lys Lys Glu Glu Ala Lys Lys Glu Glu Ser Lys  
 85 90 95  
 Glu Gly Glu Lys Lys Asp Gly Glu Glu Gly Lys Asp Glu Asp Gly Ser  
 100 105 110  
 Lys Met Asp Ile Lys Lys Asn Glu Tyr Trp Pro Ser Arg Pro Tyr Met  
 115 120 125  
 Glu Tyr Gln Met Tyr Pro Thr Gln Ile Phe Ser Asp Glu Asn Pro Asn  
 130 135 140  
 Ala Cys Ser Val Met  
 145



<210> 600  
 <211> 107  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 600  
 Met Glu Phe Pro Ser Glu Phe Ser Glu Ala Ser Ser Gln Lys Arg Ile  
 1 5 10 15  
 Gly Gly Arg Gly Lys Ile Glu Ile Lys Arg Ile Glu Asn Thr Thr Asn  
 20 25 30  
 Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
 35 40 45  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe  
 50 55 60  
 Ser Ser Arg Gly Arg Leu Tyr Glu Tyr Ala Asn Asn Ser Val Arg Gly  
 65 70 75 80  
 Thr Ile Glu Arg Tyr Lys Lys Ala Ser Ser Asp Ser Ser His Pro Gln  
 85 90 95  
 Ser Val Ser Glu Val Asn Thr Gln Phe Tyr Pro  
 100 105

<210> 601  
 <211> 233  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 601  
 Met Ala Arg Gly Lys Ile Gln Ile Lys Leu Ile Glu Asn Thr Thr Asn  
 1 5 10 15  
 Arg Gln Val Thr Tyr Ser Lys Arg Arg Asn Gly Leu Phe Lys Lys Ala  
 20 25 30  
 Asn Glu Leu Thr Val Leu Gly Asp Pro Lys Val Ser Ile Ile Met Ile  
 35 40 45  
 Ser Ser Thr Gly Lys Leu His Glu Tyr Ile Ser Pro Ser Thr Ser Thr  
 50 55 60  
 Lys Lys Met Tyr Asp Gln Tyr Gln Gln Ala Leu Glu Val Asp Leu Trp  
 65 70 75 80  
 Ser Ser His Tyr Glu Lys Met Gln Glu Asn Leu Arg Lys Leu Lys Glu  
 85 90 95  
 Val Asn Lys Lys Leu Gln Leu Glu Val Arg Arg Arg Phe Gly Glu Gly  
 100 105 110  
 Leu Asn Gly Met Ser Leu Ser Glu Leu Cys Gly Leu Glu Gln Asp Met  
 115 120 125  
 Asp Asn Ala Val Ser Leu Ile Arg Glu Arg Lys Tyr Lys Thr Leu Gly  
 130 135 140  
 Asn Gln Ile Asp Thr Ala Arg Lys Lys Lys Lys Asn Ala Glu Glu Ile  
 145 150 155 160  
 Asn Lys Ser Leu Leu Gln Asp Trp Thr Asn Leu Ile Lys His Leu Arg  
 165 170 175  
 Glu Asp Asp Pro His Phe Gly Met Val Asp Asn Gly Arg Asp Tyr Glu  
 180 185 190  
 Ala Val Ile Gly Tyr Thr Asp Ala Ala Ala Ala Arg Leu Tyr Thr  
 195 200 205  
 Leu Arg Leu Gln Pro Asp Gln Pro Asn Leu Thr Ser Gly Gly Gly Ser  
 210 215 220  
 Glu Ile Thr Thr Tyr Pro Leu Leu Glu  
 225 230

<210> 602  
 <211> 113

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 602

```

Met Ser Gln Lys Gly Leu Ile Tyr Ser Phe Val Ala Lys Gly Thr Val
 1          5          10          15
Val Leu Ala Glu His Thr Gln Phe Ser Gly Asn Phe Ser Thr Ile Ala
          20          25          30
Val Gln Cys Leu Gln Lys Leu Pro Ser Asn Ser Ser Lys Tyr Thr Tyr
          35          40          45
Ser Cys Asp Gly His Thr Phe Asn Phe Leu Thr Asp Ser Gly Phe Val
          50          55          60
Phe Leu Val Val Ala Asp Glu Ser Val Gly Arg Ser Val Pro Phe Val
65          70          75          80
Phe Leu Glu Arg Val Lys Asp Asp Phe Met Gln His Tyr Ser Ala Ser
          85          90          95
Ile Ala Ser Gly Asp Pro His Pro Leu Ala Asp Asp Asp Glu Asp Asp
          100          105          110
Asp

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&lt;210&gt; 603

&lt;211&gt; 111

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 603

```

Met Gly Arg Gly Arg Val Glu Leu Lys Arg Ile Glu Asn Lys Ile Asn
 1          5          10          15
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
          20          25          30
Tyr Glu Leu Ser Val Leu Cys Asp Val Glu Val Ala Leu Leu Ile Phe
          35          40          45
Ser Ser Arg Gly Lys Leu Tyr Glu Phe Gly Ser Ala Gly Pro Ser Gly
          50          55          60
Ile Asn Lys Thr Leu Glu Arg Tyr Gln Arg Asp Asn Phe Thr Pro Gln
65          70          75          80
Asp Asn Val Ala Glu His Glu Thr Gln Gln Asn Trp Phe Gln Glu Ile
          85          90          95
Ser Lys Leu Lys Ala Lys Tyr Glu Leu Phe Asn Lys Leu Gln Lys
          100          105          110

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&lt;210&gt; 604

&lt;211&gt; 65

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 604

```

Leu Leu Gln Lys Ser Ser Gln Glu Glu Asp Lys Ala Arg Leu Val Gln
 1          5          10          15
Asp Thr Gly Leu Gln Leu Thr Gln Ile Asn Asn Trp Phe Ile Asn Gln
          20          25          30
Arg Lys Arg Asn Trp His Ser Asn Pro Ser Ser Ser Thr Val Pro Lys
          35          40          45
Ser Lys Arg Lys Arg Ser His Ala Gly Asp Pro Asp Lys Glu Arg Pro
          50          55          60
Met
65

```

&lt;210&gt; 605

&lt;211&gt; 60

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 605

Cys Ile Glu Thr Lys Ala Arg Phe Gly Lys Ser Val Glu Ser Pro Ala  
 1 5 10 15  
 Thr Asp Lys Trp Lys Val Trp Phe Gln Asn Arg Arg Ala Arg Thr Lys  
 20 25 30  
 Leu Lys Gln Thr Ala Val Glu Cys Glu Met Leu Gln Lys Cys Cys Glu  
 35 40 45  
 Thr Leu Lys Glu Ala His Ser Arg Leu Gln Lys Glu  
 50 55 60

&lt;210&gt; 606

&lt;211&gt; 188

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 606

Met Ala Phe Ala Gly Thr Thr Gln Lys Cys Met Ala Cys Glu Lys Thr  
 1 5 10 15  
 Val Tyr Leu Val Asp Lys Leu Thr Ala Asp Asn Arg Ile Tyr His Lys  
 20 25 30  
 Ala Cys Phe Arg Cys His His Cys Lys Gly Thr Leu Lys Leu Gly Asn  
 35 40 45  
 Tyr Asn Ser Phe Glu Gly Val Leu Tyr Cys Arg Pro His Phe Asp Gln  
 50 55 60  
 Leu Phe Lys Arg Thr Gly Ser Leu Glu Lys Ser Phe Glu Gly Thr Pro  
 65 70 75 80  
 Lys Ile Ala Lys Pro Glu Lys Pro Val Asp Gly Glu Arg Pro Ala Ala  
 85 90 95  
 Thr Lys Ala Ser Ser Met Phe Gly Gly Thr Arg Asp Lys Cys Val Gly  
 100 105 110  
 Cys Lys Ser Thr Val Tyr Pro Thr Glu Lys Val Thr Val Asn Gly Thr  
 115 120 125  
 Pro Tyr His Lys Ser Cys Phe Lys Cys Thr His Gly Gly Cys Val Ile  
 130 135 140  
 Ser Pro Ser Asn Tyr Val Ala His Glu Gly Lys Leu Tyr Cys Arg His  
 145 150 155 160  
 His His Thr Gln Leu Ile Lys Glu Lys Gly Asn Leu Ser Gln Leu Glu  
 165 170 175  
 Gly Asp His Glu Arg Glu Thr Met Ala Pro Glu Ser  
 180 185

&lt;210&gt; 607

&lt;211&gt; 66

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 607

Phe Gly Lys Ile Phe Glu Glu Ser Val Arg Lys Glu Leu Ser Pro Glu  
 1 5 10 15  
 Phe Ala Lys Leu Met Gln Glu Gly Ser Ala Tyr Leu Pro Ser Gly Ile  
 20 25 30  
 Cys Met Ser Thr Met Gly Arg His Val Ser Tyr Glu Gln Ala Ile Ala  
 35 40 45  
 Trp Lys Val Leu Ser Ala Glu Glu Asn Thr Val His Cys Leu Ala Ser  
 50 55 60  
 Leu Ser  
 65

<210> 608  
 <211> 60  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 608  
 Asp Gly Asn Ile Glu Lys Val Leu Asp Arg Gly Glu Lys Ile Glu Leu  
 1 5 10 15  
 Leu Val Asp Lys Thr Val Asn Leu Arg Ser Gln Ala Gln Asp Phe Arg  
 20 25 30  
 Gln Gln Gly Pro Lys Met Arg Arg Lys Met Trp Leu Gln Asn Met Lys  
 35 40 45  
 Ile Glu Ala Asp Leu Val Leu Gly Ile Ile Ile Ala  
 50 55 60

<210> 609  
 <211> 133  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 609  
 Ala Gln Arg Glu Arg Glu Arg Glu Asn Gly Phe Ala Gly Thr Thr Gln  
 1 5 10 15  
 Lys Cys Met Ala Cys Glu Lys Thr Val Tyr Leu Val Asp Lys Leu Thr  
 20 25 30  
 Ala Asp Asn Ser Ile Tyr His Lys Ala Cys Phe Arg Cys His His Cys  
 35 40 45  
 Asn Gly Thr Leu Lys Leu Gly Asn Tyr Asn Ser Phe Glu Gly Val Leu  
 50 55 60  
 Tyr Cys Arg Pro His Phe Asp Gln Leu Phe Lys Arg Thr Gly Ser Leu  
 65 70 75 80  
 Glu Lys Ser Phe Glu Gly Thr Pro Lys Ile Ala Lys Pro Glu Lys Pro  
 85 90 95  
 Val Ala Gly Glu Arg Pro Ala Gly Pro Lys Pro Pro Val Cys Ser Gly  
 100 105 110  
 Asp Arg Glu Thr Gln Cys Val Asp Val Arg Ala Arg Phe Pro Thr Glu  
 115 120 125  
 Lys Val Thr Val Leu  
 130

<210> 610  
 <211> 162  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 610  
 Met Ala Lys Glu Lys Ile Lys Ile Lys Lys Ile Asp Asn Leu Thr Ala  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Arg Gly Leu Ile Lys Lys Ala  
 20 25 30  
 Glu Glu Leu Ser Val Leu Cys Asp Ala Asp Val Ser Leu Ile Val Phe  
 35 40 45  
 Ser Ala Thr Gly Lys Leu Tyr Asp Phe Ser Ser Ser Arg Gln Met Lys  
 50 55 60  
 Gly Glu Asp Leu Glu Gly Leu Asn Val Glu Glu Leu Asp Gln Leu Glu  
 65 70 75 80  
 Lys Lys Leu Glu Ala Gly Leu Ser Leu Val Ile Lys Asn Lys Glu Glu  
 85 90 95  
 Lys Thr Trp Asn Glu Ile Asn Lys Leu Gln Arg Lys Glu Ala Gln Leu  
 100 105 110  
 Ile Lys Gln Asn Lys Gln Leu Lys His Glu Met Lys Met Ile Leu His

[illegible]

```
<210> 611
<211> 43
<212> PRT
<213> Eucalyptus grandis
```

<400> 611  
 Met Met Ala Val Thr Ser Ala Cys Lys Asp Lys Met Gly Ile Asp Asn  
 1 5 10 15  
 Gly Lys Tyr Val Arg Tyr Thr Pro Glu Gln Val Glu Ala Leu Glu Arg  
 20 25 30  
 Leu Tyr His Glu Cys Pro Lys Pro Ser Ser Leu  
 35 40

```
<210> 612
<211> 226
<212> PRT
<213> Eucalyptus grandis
```

[illegible]

```
<210> 613
<211> 82
<212> PRT
```

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 613

```

Arg Asp His Trp Ser Ser Phe Ser Ala Pro Ile Asp Glu Met Phe Pro
 1          5          10          15
Asp Asp Ala Pro Leu Leu Pro Ser Gly Phe Arg Ile Ile Pro Leu Asp
          20          25          30
Ser Lys Ser Ser Asp Val Gln Asp Ser Leu Thr Thr Asn Arg Thr Leu
          35          40          45
Asp Leu Thr Ser Ser Leu Glu Val Gly Pro Ala Ser Thr Asn Cys Val
          50          55          60
Gly Asp Val Ala Pro Ser His Gly Ala Arg Ser Val Leu Thr Ile Ala
          65          70          75          80
Phe Gln

```

&lt;210&gt; 614

&lt;211&gt; 234

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 614

```

Leu Asp Leu Ala Ser Ser Leu Glu Ile Gly Pro Ala Gly Asn Arg Ser
 1          5          10          15
Phe Asn Asp Ile Asn Ala Asn Ser Gly Cys Thr Arg Ser Val Met Thr
          20          25          30
Ile Ala Phe Glu Phe Ala Phe Glu Ser His Met Gln Glu His Val Ala
          35          40          45
Ser Met Ala Arg Gln Tyr Val Arg Ser Ile Ile Ser Ser Val Gln Arg
          50          55          60
Val Ala Leu Ala Leu Ser Pro Ser Asn Leu Gly Ser His Ala Gly Leu
          65          70          75          80
Arg Thr Pro Leu Gly Thr Pro Glu Ala Gln Thr Leu Ala Arg Trp Ile
          85          90          95
Cys His Ser Tyr Arg Cys Tyr Leu Gly Val Asp Leu Leu Lys Ser Ser
          100          105          110
Asn Glu Gly Ser Glu Leu Ile Leu Lys Asn Leu Trp His His Ser Asp
          115          120          125
Ala Ile Met Cys Cys Ser Leu Lys Ala Leu Pro Val Phe Thr Phe Ala
          130          135          140
Asn Gln Ala Gly Leu Asp Met Leu Glu Thr Thr Leu Val Ala Leu Gln
          145          150          155          160
Asp Ile Thr Leu Glu Lys Ile Phe Asp Asp His Gly Arg Lys Thr Leu
          165          170          175
Cys Ser Glu Phe Pro Gln Ile Met Gln Gln Gly Phe Ala Cys Leu Gln
          180          185          190
Gly Gly Ile Cys Leu Ser Ser Met Gly Arg Pro Val Ser Tyr Glu Arg
          195          200          205
Ala Val Ala Trp Lys Val Met Asn Glu Glu Glu Asn Ala His Cys Ile
          210          215          220
Cys Phe Met Phe Ile Asn Trp Ser Phe Val
          225          230

```

&lt;210&gt; 615

&lt;211&gt; 100

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 615

```

Met Ala Phe Ala Gly Thr Thr Gln Lys Cys Met Ala Cys Glu Lys Thr
 1          5          10          15

```

Val Tyr Leu Val Asp Lys Leu Thr Ala Asp Asn Arg Ile Tyr His Lys  
                   20                  25                  30  
 Ala Cys Phe Arg Cys His His Cys Lys Gly Thr Leu Lys Leu Gly Asn  
                   35                  40                  45  
 Tyr Asn Ser Phe Glu Gly Val Leu Tyr Cys Arg Pro His Phe Asp Gln  
                   50                  55                  60  
 Leu Phe Lys Arg Thr Gly Ser Leu Glu Lys Ser Phe Glu Gly Asn Pro  
 65                  70                  75                  80  
 Gln Asp Leu Gln Ser Pro Glu Lys Pro Val Val Glu Arg Asp Leu Gln  
                   85                  90                  95  
 Arg Pro Lys Ala  
                   100

<210> 616  
 <211> 93  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 616  
 Met Ala Phe Lys Ser Pro Gly Gly Ile Thr Trp Leu Lys His Leu Leu  
 1                  5                  10                  15  
 Val Lys Asn Phe Tyr Leu Gly Glu His Leu Lys Cys Arg Asn Gly Leu  
                   20                  25                  30  
 Ile Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ile Asp Ile Ala  
                   35                  40                  45  
 Leu Ile Met Phe Ser Pro Ser Asp Arg Val Ser His Phe Ser Gly Lys  
                   50                  55                  60  
 Arg Arg Ile Glu Asp Val Leu Thr Arg Phe Ile Asn Leu Thr Asp Gln  
 65                  70                  75                  80  
 Glu Arg Asp Thr Pro Arg Cys Pro Gly Ser Ala His Thr  
                   85                  90

<210> 617  
 <211> 41  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 617  
 Met Gly Arg Gly Arg Val Gln Leu Lys Arg Ile Glu Asn Lys Ile Asn  
 1                  5                  10                  15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
                   20                  25                  30  
 Tyr Glu Leu Ser Leu Leu Cys Asp Ala  
                   35                  40

<210> 618  
 <211> 62  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 618  
 Glu Ile Ser Val Leu Cys Asp Ala Asp Val Ala Leu Ile Val Phe Ser  
 1                  5                  10                  15  
 Thr Lys Gly Lys Leu Phe Glu Tyr Ala Thr Asp Cys Cys Met Glu Arg  
                   20                  25                  30  
 Ile Leu Glu Arg Tyr Glu Arg Tyr Ser Tyr Ala Glu Ser Gln Val Leu  
                   35                  40                  45  
 Thr Asn Asn Ala Glu Thr Asn Gly Asn Trp Thr Leu Glu His  
                   50                  55                  60

<210> 619

<211> 86  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 619  
 Asp Ser Ser His Pro Gln Ser Val Ser Glu Val Asn Thr Gln Phe Tyr  
 1 5 10 15  
 Gln Gln Glu Ala Ser Lys Leu Arg Arg Gln Ile Arg Glu Ile Gln Val  
 20 25 30  
 Ser Asp Arg His Leu Leu Gly Glu Gly Ile Ser Asp Leu Ser Phe Lys  
 35 40 45  
 Asp Leu Lys Asn Leu Glu Ser Lys Leu Glu Lys Ser Ile Ser Arg Val  
 50 55 60  
 Arg Ser Lys Lys Asn Glu Met Leu Phe Ala Glu Ile Glu Tyr Met Gln  
 65 70 75 80  
 Met Arg Gly Leu Val Gln  
 85

<210> 620  
 <211> 99  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 620  
 Glu Asn Ser Arg Asn Glu Trp Asp Ile Leu Ser Asn Gly Gly Gln Val  
 1 5 10 15  
 Gln Glu Met Ala His Ile Ala Asn Gly Arg Asp Pro Gly Asn Ser Val  
 20 25 30  
 Ser Leu Leu Arg Val Asn Asn Ala Asn Ser Ser Gln Ser Asn Met Leu  
 35 40 45  
 Ile Leu Gln Glu Ser Cys Thr Asp Ser Val Gly Ala Tyr Val Ile Tyr  
 50 55 60  
 Ala Pro Val Asp Ile Val Ala Met Asn Val Val Leu Asn Gly Gly Asp  
 65 70 75 80  
 Pro Asp Tyr Val Ala Leu Leu Pro Ser Gly Phe Ala Ile Leu Pro Asp  
 85 90 95  
 Gly Pro Glu

<210> 621  
 <211> 72  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 621  
 Thr Glu Gln Val His Phe Leu Glu Lys Asn Phe Glu Leu Glu Asn Lys  
 1 5 10 15  
 Leu Glu Pro Glu Arg Lys Ile Gln Leu Ala Lys Asp Leu Gly Leu Gln  
 20 25 30  
 Pro Arg Gln Val Ala Ile Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys  
 35 40 45  
 Thr Lys His Leu Glu Lys Glu Tyr Glu Asp Leu Gln Ala Ser Tyr Asn  
 50 55 60  
 Ser Leu Lys Ala Asp Cys Asp Gly  
 65 70

<210> 622  
 <211> 79  
 <212> PRT  
 <213> Eucalyptus grandis



&lt;400&gt; 622

Asn	Arg	Gln	Val	Thr	Phe	Ala	Lys	Arg	Arg	Asn	Gly	Leu	Leu	Lys	Lys
1				5					10					15	
Ala	Tyr	Glu	Leu	Ser	Val	Leu	Cys	Asp	Ala	Glu	Val	Ala	Leu	Ile	Ile
			20					25					30		
Phe	Ser	Thr	Arg	Gly	Lys	Leu	Tyr	Glu	Phe	Cys	Ser	Ser	Pro	Ser	Met
		35				40					45				
Leu	Lys	Thr	Leu	Asp	Arg	Tyr	Gln	Lys	Cys	Ser	Tyr	Gly	Ser	Val	Glu
	50				55						60				
Val	Asn	Lys	Pro	Ser	Lys	Glu	Leu	Glu	Asn	Ala	Tyr	Arg	Glu	Tyr	
65					70					75					

&lt;210&gt; 623

&lt;211&gt; 242

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 623

Met	Gly	Arg	Gly	Arg	Leu	Gln	Leu	Lys	Arg	Ile	Glu	Asn	Lys	Ile	Asn
1				5					10					15	
Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Arg	Ala	Gly	Leu	Leu	Lys	Lys	Ala
			20					25					30		
His	Glu	Ile	Ser	Val	Leu	Cys	Asp	Ala	Glu	Val	Ala	Leu	Ile	Ile	Phe
		35				40					45				
Ser	Ala	Lys	Gly	Lys	Leu	Phe	Glu	Tyr	Ser	Thr	Asp	Ser	Cys	Met	Glu
	50				55						60				
Arg	Ile	Leu	Glu	Arg	Tyr	Glu	Arg	Tyr	Ser	Tyr	Ser	Glu	His	Gln	Val
65				70						75				80	
Leu	Ala	Ser	Glu	Thr	Glu	Ser	Ile	Gly	Ser	Trp	Thr	Leu	Glu	His	Ala
			85					90					95		
Lys	Leu	Lys	Ala	Arg	Leu	Glu	Val	Leu	His	Arg	Asn	Tyr	Arg	His	Phe
			100					105					110		
Met	Gly	Glu	Asp	Leu	Asp	Ser	Leu	Ser	Leu	Lys	Asp	Leu	Gln	Asn	Leu
		115				120						125			
Glu	Gln	Gln	Leu	Glu	Ser	Ala	Leu	Lys	His	Ile	Arg	Ser	Arg	Lys	Asn
	130					135					140				
Gln	Leu	Met	His	Glu	Ser	Ile	Ser	Val	Leu	Gln	Lys	Lys	Asp	Arg	Ala
145					150					155				160	
Leu	Gln	Glu	Gln	Asn	Asn	Leu	Leu	Thr	Arg	Lys	Val	Lys	Glu	Lys	Glu
			165					170					175		
Arg	Ala	Leu	Ala	Gln	Gln	Ala	Gln	Trp	Glu	Gln	Gln	Asp	His	Ala	Leu
			180					185					190		
Asp	Ser	Pro	Val	Val	Leu	Pro	His	Tyr	Leu	Pro	Ser	Leu	Asp	Ile	Asn
		195					200					205			
Gly	Ser	Tyr	Gln	Ala	Arg	His	Asn	Gly	His	Asp	Asp	Gly	Glu	Asn	Leu
	210					215					220				
Thr	Gln	Pro	Arg	Ala	Gly	Thr	Leu	Leu	Pro	Pro	Trp	Met	Leu	His	Arg
225					230					235					240
Leu	Asn														

&lt;210&gt; 624

&lt;211&gt; 360

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 624

Met	Lys	Arg	Leu	Gly	Ser	Ser	Asp	Ser	Leu	Gly	Ala	Leu	Met	Ser	Ile
1				5					10					15	
Cys	Pro	Pro	Ser	Glu	Glu	Leu	Gln	His	Ser	Pro	Arg	Asn	Gly	Asn	Pro
			20					25					30		

Ile Tyr His Ser Arg Asp Leu Gln Ser Met Leu Glu Leu Gly Leu Asp  
 35 40 45  
 Glu Glu Gly Cys Val Glu Asp Gln Ser Ala Gly Gly Gly Gly His Val  
 50 55 60  
 Gly Gly Glu Lys Lys Arg Arg Leu Ser Ile Asp Gln Val Lys Ala Leu  
 65 70 75 80  
 Glu Lys Asn Phe Glu Val Glu Asn Lys Leu Glu Pro Glu Arg Lys Val  
 85 90 95  
 Lys Leu Ala Gln Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Val Trp  
 100 105 110  
 Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Leu Glu Arg Asp  
 115 120 125  
 Tyr Gly Val Leu Lys Ser Ser Tyr Glu Ala Leu Lys Leu Ser Tyr Asp  
 130 135 140  
 Ala Leu Lys His Asp Asn Glu Ala Leu His Lys Glu Ile Lys Glu Leu  
 145 150 155 160  
 Lys Ser Lys Leu Arg Glu Glu Asp Asp Asn Pro Glu Ser Asn Leu Ser  
 165 170 175  
 Val Lys Glu Glu Val Ile Ile Pro Gly His Asp Val Ser Asp Lys Ile  
 180 185 190  
 Arg Ala Ala Asp Asp Gly Asp Asp Thr Lys Arg Ser Pro Pro Pro  
 195 200 205  
 Pro Ile Thr Ala Pro Pro Arg Glu Leu Ser Phe Asn Asn Gly Gly Leu  
 210 215 220  
 Lys Asp Gly Ser Ser Asp Ser Asp Ser Ser Ala Ile Val Asn Glu Glu  
 225 230 235 240  
 Asn Ala Ala Thr Ser Ser Ser Ser Pro Asn Pro Ala Val Gln Ser His  
 245 250 255  
 Gly Gly Phe Leu Lys Phe Met Gly Ser Ser Ser Ser Ala Ser Pro  
 260 265 270  
 Pro Pro Pro Pro Pro Ala Ser Phe Gly Gly Cys Phe Ser Phe Gln Phe  
 275 280 285  
 Gln Arg Ala Tyr Gln Pro Gln Pro Gln Pro Pro His His His His His  
 290 295 300  
 His Ser Pro Tyr Val Lys Met Glu Glu His Asn Phe Leu Gly Gly Glu  
 305 310 315 320  
 Glu Asp Cys Asn Phe Phe Ser Gln Gln Gln Ala Pro Asn Pro Gln Trp  
 325 330 335  
 Glu Arg Pro Gln Gln Gly Lys Arg Arg Lys Thr Asn Ser Pro Arg Gly  
 340 345 350  
 Arg Gly Leu Gln Ile Arg Asp Arg  
 355 360

&lt;210&gt; 625

&lt;211&gt; 75

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 625

Met Gly Glu Glu Ser Phe Ile Tyr Ser Phe Val Ala Arg Gly Thr Met  
 1 5 10 15  
 Ile Leu Ala Glu Tyr Thr Glu Phe Thr Gly Asn Phe Pro Ala Ile Ala  
 20 25 30  
 Ala Gln Cys Leu Gln Lys Leu Pro Ser Ser Asn Asn Lys Phe Thr Tyr  
 35 40 45  
 Ser Cys Asp His His Thr Phe Asn Phe Leu Leu Glu Asp Gly Tyr Ala  
 50 55 60  
 Tyr Cys Val Val Ala Lys Glu Ser Val Gly Gln  
 65 70 75

&lt;210&gt; 626

<211> 53  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 626  
 Ile Pro Phe Ser Leu Phe Pro Pro Gln Ser Glu Gly Phe Phe Asn Pro  
 1 5 10 15  
 Met Asp Gly Asn Leu Ser Leu Gln Ile Gly Tyr Asn Pro Thr Cys Leu  
 20 25 30  
 Asp Glu Met Asn Ala Ser Val Ser Ser Gln Asn Val Ala Gly Phe Ile  
 35 40 45  
 Pro Gly Trp Met Leu  
 50

<210> 627  
 <211> 50  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 627  
 Ala Gly Gly Glu Pro Met Trp Ile Ala Gly Pro Asp Gly Ser Ser Ser  
 1 5 10 15  
 Val Leu Asn Glu Asp Glu Tyr Ile Arg Ala Phe Pro Arg Gly Ile Val  
 20 25 30  
 Thr Asn Pro Thr Gly Phe Lys Arg Glu Pro His Asp Lys Pro Gly Ser  
 35 40 45  
 Ser Ser  
 50

<210> 628  
 <211> 232  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 628  
 Leu Gly Thr Gln Ile Pro Ser Gly Ile His Met Pro Ser Ala Asn Leu  
 1 5 10 15  
 Ser Ser Ile Ser Phe Leu Gly Pro Ile Pro Met Val Ser Gly Asp Gly  
 20 25 30  
 Gly Gly Arg Thr Gly Ser Glu Arg Ser Arg Asn Ala Asp Cys Ala Pro  
 35 40 45  
 Ala Gly Phe Pro Gly Gly Asp Glu Asp Val Asn Lys Gly Gly Asp Ile  
 50 55 60  
 Pro Tyr Gly Met Ser Thr Ile Val Arg Val Ile Pro Asn Ser Arg Tyr  
 65 70 75 80  
 Leu Arg Val Ala Gln Gln Leu Leu Asp Glu Ile Val Asn Val Arg Lys  
 85 90 95  
 Ala Leu Lys Arg Ser Asp Asp Ala Asn Asp Gln Ser Arg His Glu Asn  
 100 105 110  
 Gln Arg Ser Pro Lys Asp Ala Asp Gly Gly Ser Lys Asn Glu Ala Ser  
 115 120 125  
 Ser Asn Pro Gln Glu Ser Ala Ser Asn Ser Ser Glu Leu Ser Ala Ala  
 130 135 140  
 Glu Lys Gln Asp Leu Gln Asn Lys Leu Thr Lys Leu Leu Ser Met Leu  
 145 150 155 160  
 Asp Glu Val Asp Lys Arg Tyr Lys Gln Tyr Tyr His Gln Met Gln Ile  
 165 170 175  
 Val Val Gln Ser Phe Asp Thr Ile Ala Gly Ser Gly Ala Ala Lys Pro  
 180 185 190  
 Tyr Thr Ala Leu Ala Leu Gln Arg Ile Ser Arg His Phe Arg Cys Leu  
 195 200 205

His Asp Ala Ile Thr Gly Gln Ile Gln Ala Thr Arg Lys Ser Leu Gly  
 210 215 220  
 Glu Gln Asp Thr Ser Thr Glu Thr  
 225 230

<210> 629  
 <211> 69  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 629  
 Leu Asp Ile Leu Glu Trp Ile Leu Glu Leu Ile Gly Val Thr Tyr Arg  
 1 5 10 15  
 Arg Leu Asp Gly Ser Thr Gln Val Thr Asp Arg Gln Ser Ile Val Asp  
 20 25 30  
 Thr Phe Asn Asn Asp Thr Ser Ile Phe Ala Cys Leu Leu Ser Thr Arg  
 35 40 45  
 Ala Gly Gly Gln Gly Leu Asn Leu Thr Gly Ala Asp Thr Val Val Ile  
 50 55 60  
 His Asp Met Gly Phe  
 65

<210> 630  
 <211> 62  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 630  
 Cys Trp His His Val His Thr Gln Cys Gly Lys Ala Gly Phe Gly Met  
 1 5 10 15  
 Leu Lys Gln Glu Asn Leu Ser Asn Glu Leu Asp Arg Val Lys Lys Glu  
 20 25 30  
 Asn Asp Asn Leu Gln Ile Gln Leu Arg His Leu Arg Gly Arg His Asn  
 35 40 45  
 Ile Thr Glu Pro Gln Arg Ala Asp Asn Pro Arg Arg His Ser  
 50 55 60

<210> 631  
 <211> 113  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 631  
 Gly Ser Lys Glu Leu Glu Ser Leu Glu Arg Gln Leu Asp Gly Ser Leu  
 1 5 10 15  
 Lys Gln Ile Arg Ser Arg Arg Thr Gln Tyr Met Leu Asp Gln Leu Thr  
 20 25 30  
 Asp Leu Gln His Arg Glu Gln Leu His Glu Ala Asn Arg Thr Leu  
 35 40 45  
 Asn Gln Arg Leu Met Glu Gly Tyr Gln Val Asn Ala Leu Gln Leu Asn  
 50 55 60  
 Gln His Ala Glu Glu Val Gly Gly Tyr Gly His Pro Pro Pro Pro Pro  
 65 70 75 80  
 Leu Pro Pro Gln Pro Leu Ala Gln Pro His Ser Glu Ala Phe Phe Ile  
 85 90 95  
 Pro Trp Asn Val Asn Pro Leu Cys Lys Trp Asp Thr Ser Pro Ile Gln  
 100 105 110  
 Cys

<210> 632

<211> 393  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 632  
 Met Val Glu Gly Glu Arg Asn Gly Asp Asp Asp Gly Ala Ser Gln Gly  
 1 5 10 15  
 Glu Gln Gln Trp Lys His Gln Gln Ala Leu Asp Arg Leu Gly Lys Tyr  
 20 25 30  
 Val Arg Tyr Thr Ala Glu Gln Val Glu Ala Leu Glu Arg Val Tyr Ser  
 35 40 45  
 Glu Cys Pro Lys Pro Ser Ser Leu Arg Arg Gln Gln Leu Ile Arg Glu  
 50 55 60  
 Cys Pro Ile Leu Ser Asn Ile Glu Pro Lys Gln Ile Lys Val Trp Phe  
 65 70 75 80  
 Gln Asn Arg Arg Cys Arg Glu Lys Gln Arg Lys Glu Ala Ser Arg Leu  
 85 90 95  
 Gln Thr Val Asn Arg Lys Leu Thr Ala Met Asn Lys Leu Leu Met Glu  
 100 105 110  
 Glu Asn Asp Arg Leu Gln Lys Gln Val Ser Gln Leu Val Cys Glu Asn  
 115 120 125  
 Gly Tyr Met Arg Gln Gln Leu His Thr Thr Ser Ala Thr Thr Thr Asp  
 130 135 140  
 Ala Ser Cys Asp Ser Val Val Thr Thr Pro Gln His Ser Leu Arg Asp  
 145 150 155 160  
 Ala Asn Asn Pro Ala Gly Leu Leu Ser Ile Ala Glu Glu Thr Leu Ala  
 165 170 175  
 Glu Phe Leu Ser Lys Ala Thr Gly Thr Ala Val Asp Trp Val Gln Met  
 180 185 190  
 Pro Gly Met Lys Pro Gly Pro Asp Ser Val Gly Ile Phe Ala Ile Ser  
 195 200 205  
 Gln Ser Cys Ser Gly Val Ala Ala Arg Ala Cys Gly Leu Val Ser Leu  
 210 215 220  
 Glu Pro Thr Lys Ile Val Glu Ile Leu Lys Asp Arg Thr Ser Trp Phe  
 225 230 235 240  
 Arg Asp Cys Arg Ser Leu Glu Val Phe Thr Met Phe Pro Ala Gly Asn  
 245 250 255  
 Gly Gly Thr Ile Glu Leu Val Tyr Thr Gln Ile Tyr Ala Pro Thr Thr  
 260 265 270  
 Leu Ala Pro Ala Arg Asp Leu Trp Thr Leu Arg Tyr Thr Thr Thr Leu  
 275 280 285  
 Glu Asn Gly Ser Leu Val Val Cys Glu Arg Ser Leu Ser Gly Ser Gly  
 290 295 300  
 Ala Gly Pro Asn Pro Ala Ser Ala Ala Gln Phe Val Arg Ala Glu Ile  
 305 310 315 320  
 Leu Pro Ser Gly Tyr Leu Ile Arg Pro Cys Glu Gly Gly Gly Ser Ile  
 325 330 335  
 Ile His Ile Val Asp His Leu Asn Leu Glu Ala Trp Ser Val Pro Glu  
 340 345 350  
 Val Leu Arg Pro Leu Tyr Glu Ser Ser Lys Val Val Ala Gln Arg Ile  
 355 360 365  
 Thr Ile Ala Ala Leu Arg Tyr Ile Arg Gln Ile Ala Gln Glu Thr Ser  
 370 375 380  
 Gly Glu Val Val Tyr Gly Leu Gly Arg  
 385 390

<210> 633  
 <211> 84  
 <212> PRT  
 <213> Eucalyptus grandis

&lt;400&gt; 633

```

Met Gly Ile Asp Asp Leu Cys Asn Thr Gly Leu Val Leu Ser Leu Gly
 1           5           10           15
Leu Glu Thr Pro Phe Lys Ile Glu Ala Gln Arg Gln Ala Lys Gln Arg
          20           25           30
Leu Asn Phe Glu Pro Ser Leu Thr Leu Cys Leu Ser Gly Thr Thr Lys
          35           40           45
Ala Thr Arg Asp Glu Gln Pro Pro Ala Asp His Leu Tyr Arg Gln Ala
 50           55           60
Ser Pro His Ser His Asn Ser Leu Ser Ala Val Ser Ser Phe Ser Ser
65           70           75           80
Pro Arg Val Lys

```

&lt;210&gt; 634

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 634

```

Glu Ser Gly Glu Ala Arg Arg Leu Arg Asp Ser Leu Val Glu Met Ala
 1           5           10           15
Asn Val Gly Lys Ser Pro Ser Met Leu Thr Glu Cys Gly Leu Ala Glu
          20           25           30
Asn Ser Leu Val Ser Ile Ala Glu Arg Val Thr His His Arg Trp Ser
          35           40           45
Trp Ser Glu Val Lys Tyr Leu Ser Asp Cys His Leu Met Ala Leu Asp
 50           55           60
Ala Ser Leu
65

```

&lt;210&gt; 635

&lt;211&gt; 103

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 635

```

Tyr Ser Glu Ala Ser Ser Asp Glu Gly Asn Gln Tyr Ser Thr Arg Glu
 1           5           10           15
Glu Glu Gly Glu Ile Glu Glu Phe Glu Glu Asp Thr Tyr Ser Gly Ala
          20           25           30
Pro Gly Ala Leu Pro Ile Asn Lys Asp Gln Ser Asp Glu Asp Val Pro
          35           40           45
Ala Glu Glu Cys Asp Glu Tyr Pro Trp Thr Ser Glu Arg Thr Arg Asn
 50           55           60
Asn His Leu Pro Glu Glu Ala Gly Phe Ser Gly Ser Ser Ala Asp Ser
65           70           75           80
Pro Arg Gly Ile Arg Met Ala Ser Pro Ser Ala Ser Ser Gln Lys Phe
          85           90           95
Gly Ser Leu Ser Ala Leu Asp
          100

```

&lt;210&gt; 636

&lt;211&gt; 299

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 636

```

Met Ala Phe His Asn His Leu Ser His Gln Asp Leu Ser Ser Leu His
 1           5           10           15
His Phe Ala Ala Asp Gln Gln Pro Pro Pro Pro Gln His Gln Gln Gln

```

20 25 30  
 Gln Gln His Leu Pro Asp Ser Ser Ser Val His His Gln Leu His  
 35 40 45  
 His Ala Ala Gly Pro Asn Trp Leu Asn Thr Ala Leu Leu Arg Ser Asp  
 50 55 60  
 Ala Ala Ala Ala Ala Ala Ala Ala Ala Gly Gly Asn Ser Phe Leu Asn  
 65 70 75 80  
 Leu His Thr Ser Ser Asp Ser Ala Ala Ser Pro Gln Ala Gln Gln Gln  
 85 90 95  
 Pro Pro Ala Thr Ser Ala Ser Ala Ala Gly His His Gln Trp Leu  
 100 105 110  
 Ser Arg Gln His Ser Ser Leu Leu Gln Arg Asn His Ser Glu Val Ile  
 115 120 125  
 Asp Ala Asp Ser Ile Ile Asp Ser Ala Asp Leu Lys Glu Ser Val Ser  
 130 135 140  
 Lys Gly Asp Gly Gly Gly Gly Gly Ala Ala Glu Ser Asn Trp Glu Asn  
 145 150 155 160  
 Ala Lys Tyr Lys Ala Glu Ile Leu Ala His Pro Leu Tyr Glu Gln Leu  
 165 170 175  
 Leu Ser Ala His Val Ala Cys Leu Arg Ile Ala Thr Pro Val Asp Gln  
 180 185 190  
 Leu Pro Arg Ile Asp Ala Gln Leu Ala Gln Ser Gln His Val Val Ala  
 195 200 205  
 Lys Tyr Ser Ala Met Ser Gln Gly Leu Val Ala Asp Asp Lys Glu Leu  
 210 215 220  
 Asp Gln Phe Met Thr His Tyr Val Leu Leu Leu Cys Ser Phe Lys Glu  
 225 230 235 240  
 Gln Leu Gln Gln His Val Arg Val His Ala Met Glu Ala Val Met Ala  
 245 250 255  
 Cys Trp Glu Ile Glu Gln Ser Leu Gln Ser Leu Thr Gly Val Ser Pro  
 260 265 270  
 Gly Glu Gly Thr Gly Ala Thr Met Ser Asp Asp Glu Asp Asp Gln Val  
 275 280 285  
 Asp Ser Asp Ala Asn Leu Phe Asp Gly Ser Leu  
 290 295

&lt;210&gt; 637

&lt;211&gt; 91

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 637

Met Gly Arg Arg Lys Ile Glu Ile Gln Pro Ile Thr His Glu Arg Asn  
 1 5 10 15  
 Arg Ser Val Thr Phe Leu Lys Arg Lys Asn Gly Leu Phe Lys Lys Ala  
 20 25 30  
 Tyr Glu Leu Gly Val Leu Cys Ser Val Asp Val Ala Val Ile Ile Phe  
 35 40 45  
 Glu Asp Arg Pro Gly His Ser Pro Lys Leu Tyr Gln Tyr Ser Ser Arg  
 50 55 60  
 Gly Ile Gln Asp Ile Val Gln Arg His Leu His His Asp Gly Glu Thr  
 65 70 75 80  
 Asp Asn Arg Gly Pro Gly Asp Phe Ser Gly Ala  
 85 90

&lt;210&gt; 638

&lt;211&gt; 129

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 638

```

Met Phe Ser Thr Gly Glu Tyr Ser Ala Ala Ala Phe Glu Gly Met Asp
 1          5          10          15
Ser Leu Pro Ser Pro Arg Lys Lys Lys Asn Gln Leu Val Asn Arg Arg
          20          25          30
Arg Phe Ser Asp Glu Gln Ile Arg Ser Leu Glu Ser Ile Phe Glu Ser
          35          40          45
Glu Ser Arg Leu Glu Pro Arg Lys Lys Leu Gln Leu Ala Arg Glu Leu
          50          55          60
Gly Leu Gln Pro Arg Gln Val Ala Ile Trp Phe Gln Asn Lys Arg Ala
65          70          75          80
Arg Trp Lys Ser Lys Gln Leu Glu Arg Asp Phe Ala Ile Leu Arg Ala
          85          90          95
Asn Tyr Asn Ala Leu Tyr Ser Arg Phe Glu Ser Leu Lys Lys Glu Lys
          100          105          110
Gln Ser Leu Val Thr Gln Ile Glu Lys Leu Asn Gln Leu Val Glu Lys
          115          120          125
Pro

```

```

<210> 639
<211> 101
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 639
Met Leu Tyr Arg Gly Gly Met Arg Thr Pro Asn Ala Gln Gln Ile Glu
 1          5          10          15
Gln Ile Thr Ala Gln Leu Ser Lys Tyr Gly Lys Ile Glu Gly Lys Asn
          20          25          30
Val Phe Tyr Trp Phe Gln Asn His Lys Ala Arg Glu Arg Gln Lys Gln
          35          40          45
Lys Arg Asn Ser Leu Gly Leu Ser His Cys Ser Arg Thr Pro Thr Thr
          50          55          60
Ala Ala Thr Ile Ala Thr Val Thr Leu Asn Thr Thr Lys Val His Arg
65          70          75          80
Thr Ile Leu Pro Tyr Phe Phe Pro His Ser Gly Ile Gly Val Arg Ala
          85          90          95
Leu His Asp Ala Cys
          100

```

```

<210> 640
<211> 85
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 640
Thr Pro Ser Ser Pro Ala Ser Asp Gln Ile Leu Ser Ser Cys Thr Pro
 1          5          10          15
Gln Asp Phe His Gly Val Ala Ser Leu Leu Gly Lys Arg Ser Met Ser
          20          25          30
Phe Thr Gly Ile Asp Val Gly Asp Asp Pro Asn Ile Asn Asn Gly Asn
          35          40          45
Val Asn Gly Glu Glu Asp Leu Ser Glu Asp Asp Gly Ser Gln Pro Gly
          50          55          60
Gly Glu Lys Lys Arg Arg Leu Asn Met Glu Gln Val Lys Thr Leu Glu
65          70          75          80
Lys Asn Phe Glu Leu
          85

```

```

<210> 641
<211> 162

```



&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 641

Gly Lys Ala Thr Ala Ser Gly Gly Gly Gly Gly Tyr Met Ser Ser Pro  
 1 5 10 15  
 Val Pro Leu Gly Pro Phe Thr Gly Tyr Ala Ser Ile Leu Lys Gly Ser  
 20 25 30  
 Arg Phe Leu Arg Pro Ala Gln Gln Leu Leu Glu Glu Leu Cys Glu Ala  
 35 40 45  
 Gly Arg Ala Ile Cys Thr Glu Lys Met Thr Asp Asp Ser Cys Ala Met  
 50 55 60  
 Thr Glu Pro Ala Met Asp Ser Leu Ser Gly Gly Cys Gly Ile Gly Met  
 65 70 75 80  
 Asp Asp Gly Cys Gly Gly Asp Gly Gly Glu Phe Arg Arg Lys Lys Ser  
 85 90 95  
 Arg Leu Ile Ser Met Leu Asp Glu Val Cys Arg Arg Tyr Lys Gln Tyr  
 100 105 110  
 Cys Gln Gln Met Gln Ala Val Val Ala Ser Phe Glu Cys Val Ala Gly  
 115 120 125  
 Leu Ser Asn Ala Ala Pro Tyr Ala Asn Leu Ala Leu Lys Ala Met Ser  
 130 135 140  
 Lys His Phe Lys Cys Leu Lys Asn Ala Ile Ala Asp Gln Leu Gln Phe  
 145 150 155 160  
 Thr Asn

&lt;210&gt; 642

&lt;211&gt; 155

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 642

Met Gly Gln Gln Ser Leu Ile Tyr Ser Phe Val Ala Arg Gly Thr Val  
 1 5 10 15  
 Ile Leu Ala Glu Tyr Thr Glu Phe Thr Gly Asn Phe Thr Ser Ile Ala  
 20 25 30  
 Ser Gln Cys Leu Gln Lys Leu Pro Ala Thr Asn Asn Lys Phe Thr Tyr  
 35 40 45  
 Asn Cys Asp Gly His Thr Phe Asn Tyr Leu Val Glu Asn Gly Phe Thr  
 50 55 60  
 Tyr Cys Val Val Ala Ala Glu Ser Ala Gly Arg Gln Ile Pro Ile Ala  
 65 70 75 80  
 Phe Leu Glu Arg Ile Lys Asp Asp Phe Asn Lys Arg Tyr Gly Gly Gly  
 85 90 95  
 Lys Ala Thr Thr Ala Ala Ala Asn Ser Leu Asn Arg Glu Phe Gly Pro  
 100 105 110  
 Lys Leu Lys Glu His Met Gln Tyr Cys Val Asp His Pro Glu Glu Ile  
 115 120 125  
 Ser Lys Leu Ala Lys Val Lys Ala Gln Val Ser Glu Val Lys Gly Val  
 130 135 140  
 Met Met Glu Asn Ile Glu Lys Val Leu Asp Arg  
 145 150 155

&lt;210&gt; 643

&lt;211&gt; 54

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 643

Glu Trp Trp Ser Val His Asn Lys Trp Pro Tyr Pro Thr Glu Ala Asp

[illegible]

```
<210> 644
<211> 308
<212> PRT
<213> Eucalyptus grandis
```

[illegible]

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<210> 645
<211> 197
<212> PRT
<213> Eucalyptus grandis
```

<400> 645

Met Glu Glu Tyr Gly Gln Met Asn Glu Asn Ser Ser Thr Gly Ser Arg  
 1 5 10 15  
 Gly Asn Asn Ser Phe Leu Tyr Ala Ser Pro Val Leu Gly Pro Ser Ser  
 20 25 30  
 Ser Gly Asn Ser Asn Tyr Gly Arg Gly Asn Ser Ser Gly Gly His Phe  
 35 40 45  
 Tyr Ser Gln Ser Gly Asp His Cys Phe Gln Ser Glu Ala Pro Pro His  
 50 55 60  
 Pro Val Val Lys Thr Glu Ala Thr Thr Ser His His Gly His Ala Gln  
 65 70 75 80  
 Lys Phe His His Tyr Ser Leu Val Arg Asp His His Asp Pro Ser Ala  
 85 90 95  
 Ser His His His His His Gln His His Gln His Gln Gln Leu Gln Thr  
 100 105 110  
 Ala Ser Glu Ser Ser Arg Glu Val Asp Ala Met Lys Ala Lys Ile Ile  
 115 120 125  
 Ala His Pro Gln Tyr Ser Asn Leu Leu Glu Ala Tyr Met Asp Cys Gln  
 130 135 140  
 Lys Val Gly Ala Pro Pro Glu Val Val Ala Lys Leu Ser Val Ala Arg  
 145 150 155 160  
 Gln Glu Phe Glu Ser Arg Gln Arg Ser Ser Val Ala Ser Ala Asp Gly  
 165 170 175  
 Ser Lys Asp Pro Glu Leu Asp Gln Phe Met Glu Ala Tyr Tyr Asp Met  
 180 185 190  
 Leu Val Lys Tyr Arg  
 195

&lt;210&gt; 646

&lt;211&gt; 304

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 646

Glu Glu Gly Glu Asp Glu Gln Val Leu Gln Pro Lys Ile Lys Arg Lys  
 1 5 10 15  
 Arg Ser Leu Arg Val Arg Pro Arg His Thr Met Glu Arg Pro Glu Glu  
 20 25 30  
 Lys Ser Ser Asn Gly Ala Leu Pro Val Gln Cys Gly Asp Ser Ala Phe  
 35 40 45  
 Leu Pro Leu Gln Met Asp His Lys Tyr Gln Pro Gln Ser Arg Thr Ala  
 50 55 60  
 Ser Glu Thr Asn Pro Phe Gly Glu Pro Thr Ala Ser Lys His Gly His  
 65 70 75 80  
 Gly Gly Pro Ser Met Lys Ser Lys Arg Gln Thr Ser Leu Arg Arg Ile  
 85 90 95  
 Asn Asp Pro Ser Lys Leu His Pro Leu Pro Lys Ser Ser Arg Ser Asn  
 100 105 110  
 His Ile Ser Ser Ser Asp Ala Ala Glu Arg Ser Arg Glu Asn Trp  
 115 120 125  
 Asn Gly Arg Val Ala Asn Pro Ser Gly Asn Ser Ser Val Gly Ala Gly  
 130 135 140  
 Leu Ser Glu Ile Ile Gln Arg Lys Cys Lys Asn Val Val Ser Lys Leu  
 145 150 155 160  
 Gln Arg Arg Ile Asp Lys Glu Gly His His Ile Val Pro Leu Leu Thr  
 165 170 175  
 Asp Leu Trp Lys Arg Met Gly Ser Pro Gly His Met Gly Gly Val Gly  
 180 185 190  
 Ser Asn Leu Leu Asp Leu Arg Lys Ile Asp Gln Arg Ile Glu Lys Leu  
 195 200 205  
 Glu Tyr Gly Asp Val Met Asp Leu Val Leu Asp Val Gln Leu Met Leu  
 210 215 220

Lys Gly Ala Met Gln Phe Tyr Gly Phe Ser His Glu Val Arg Ser Glu  
 225 230 235 240  
 Ala Arg Lys Val His Asp Leu Phe Phe Asp Ile Leu Lys Ile Ala Phe  
 245 250 255  
 Pro Asp Thr Asp Phe Glu Glu Val Arg Asn Ala Leu Ser Phe Ser Gly  
 260 265 270  
 Pro Gly Ala Ala Ser Gln Ser Ala Pro Ser Pro Lys Gln Ala Ser Ala  
 275 280 285  
 Gly Gln Ser Lys Arg His Arg Ala Leu Asn Glu Val Asp Ala Asp Lys  
 290 295 300

&lt;210&gt; 647

&lt;211&gt; 166

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 647

Val Val Gly Lys Ala Leu Gln Lys Cys Ala Lys Ile Ser Thr Asp Leu  
 1 5 10 15  
 Lys Lys Ala Leu Tyr Gly Ser Ser Val Ala Ser Cys Glu His Tyr Ser  
 20 25 30  
 Glu Val Glu Ala Ser Ser Asn Arg Ile Val Thr Gln Asp Asp Val Asp  
 35 40 45  
 Ala Ala Cys Gly Ala Asp Asp Thr Asp Phe Gln Pro Val Leu Lys Pro  
 50 55 60  
 Tyr Gln Leu Val Gly Val Asn Phe Leu Leu Leu Leu His Arg Lys Gly  
 65 70 75 80  
 Val Gly Gly Glu Gly Gln Gly Val Leu Lys Tyr Asp Thr Ser Leu Ala  
 85 90 95  
 Asn Gly Ala Ser Leu Tyr Ser Met Gln Ala Ile Leu Ala Asp Glu Met  
 100 105 110  
 Gly Leu Gly Lys Thr Ile Gln Ala Ile Thr Tyr Leu Thr Leu Leu Lys  
 115 120 125  
 His Leu Asn Asn Asp Pro Gly Pro His Leu Val Val Cys Pro Ala Ser  
 130 135 140  
 Leu Leu Glu Asn Trp Glu Arg Glu Leu Lys Arg Trp Cys Pro Ser Phe  
 145 150 155 160  
 Ser Val Leu Gln Tyr His  
 165

&lt;210&gt; 648

&lt;211&gt; 142

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 648

Met Phe Met Val Asp Asp His Ala Leu Cys Leu Ser Cys Asn Cys Thr  
 1 5 10 15  
 Phe Asn Ile Leu Ala Cys Cys Asn Cys Ser Tyr Pro Lys Asp Ser Asp  
 20 25 30  
 Lys His Met Leu Ala Lys Gln Ala Gly Leu Thr Arg Ser Gln Val Ser  
 35 40 45  
 Asn Trp Phe Ile Asn Ala Arg Val Arg Leu Trp Lys Pro Met Val Glu  
 50 55 60  
 Glu Met Tyr Leu Glu Glu Thr Lys Ser Arg Glu Gln Ala Gly Ser Glu  
 65 70 75 80  
 Asn Gly Thr Thr Arg Arg Ala Ala Thr Lys Ser Asn Lys Asp Ala Ala  
 85 90 95  
 Gly Leu Lys Ser Ala Ser Gln Glu Asp Asn Ala Phe Gly Met Asn Ser  
 100 105 110  
 Ser Ile Lys Ser Phe Gln Ser Ser Pro Asn Lys Ala Leu Asn Gln Ala

	115		120		125
Ala	Ile Ser	Pro Ser Glu	Asn Ser	Asn Ser Thr	Ser Ser Thr
	130		135		140

<210> 649  
 <211> 131  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 649

Gly	Ala	Pro	Ala	Ser	Gly	Gln	Ser	Ser	His	Ala	Leu	Gln	Val	Glu	Glu
1			5					10					15		
Thr	Arg	Asp	Ser	Pro	Leu	Gly	Phe	Val	Val	Lys	Val	Glu	Asp	Arg	Leu
		20					25					30			
Ser	Ser	Gly	Ser	Gly	Gly	Ser	Ala	Val	Val	Asp	Glu	Asp	Gly	Pro	Gln
		35				40					45				
Leu	Val	Asp	Ser	Gly	His	Ser	Tyr	Phe	His	Cys	Asn	Asp	Tyr	Pro	Gly
	50				55					60					
Ser	Leu	Val	Ala	Val	Asn	Gly	Leu	Gln	Ser	Glu	Asp	Asp	Gly	Ser	Asp
65				70				75						80	
Asp	Ser	Arg	Gly	Tyr	Cys	Ser	Glu	Ile	Phe	Ala	Ala	Ala	Glu	Glu	Pro
			85					90					95		
His	Gln	Glu	Gly	Gly	Val	Pro	Asn	Gly	Val	Val	Gly	Val	Ala	Leu	Val
			100					105					110		
Leu	Gly	Phe	Arg	Leu	Leu	Val	Cys	Ser	Arg	Lys	Trp	Phe	Lys	Ser	Asn
		115					120					125			
Met	Cys	Ser													
		130													

<210> 650  
 <211> 152  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 650

Ser	Arg	Leu	Gln	Ala	Val	Asn	Arg	Lys	Leu	Thr	Ala	Met	Asn	Lys	Leu
1			5					10					15		
Leu	Met	Glu	Glu	Asn	Asp	Arg	Leu	Gln	Lys	Gln	Val	Ser	Gln	Leu	Val
		20					25					30			
Tyr	Glu	Asn	Ser	Tyr	Phe	Arg	Gln	Gln	Thr	Gln	Asn	Ala	Thr	Leu	Ala
		35				40					45				
Thr	Thr	Asp	Thr	Ser	Cys	Glu	Ser	Val	Val	Thr	Ser	Gly	Gln	His	His
	50				55					60					
Leu	Thr	Pro	Gln	His	Pro	Pro	Arg	Asp	Ala	Ser	Pro	Ala	Gly	Leu	Leu
65				70				75						80	
Ser	Ile	Ala	Glu	Glu	Thr	Leu	Thr	Glu	Phe	Leu	Ser	Lys	Ala	Thr	Gly
			85					90					95		
Thr	Ala	Val	Glu	Trp	Val	Gln	Leu	Pro	Gly	Met	Lys	Pro	Gly	Pro	Asp
			100					105					110		
Ser	Ile	Gly	Ile	Ile	Ala	Ile	Ser	His	Gly	Cys	Thr	Gly	Val	Ala	Ala
		115					120					125			
Arg	Ala	Cys	Gly	Leu	Val	Gly	Leu	Glu	Pro	Ser	Arg	Val	Ala	Glu	Ile
		130					135					140			
Leu	Lys	Asp	Arg	Pro	Ser	Trp	Tyr								
145						150									

<210> 651  
 <211> 151  
 <212> PRT  
 <213> Eucalyptus grandis

&lt;400&gt; 651

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Asp Asp Val Cys Gly Gly Gly Lys Arg Pro Glu Arg Pro Phe Phe Cys
 1          5          10          15
Thr Tyr Asp Gly Glu Glu Asn Gly Asp Asp Asp Tyr Asp Glu Tyr Leu
          20          25          30
His Gln Pro Glu Lys Lys Arg Arg Leu Ser Ile Glu Gln Val Leu Tyr
          35          40          45
Leu Glu Lys Ser Phe Glu Thr Asp Asn Lys Leu Glu Pro Asp Lys Lys
          50          55          60
Val Gln Leu Ala Lys Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Ile
          65          70          75          80
Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Met Glu Lys
          85          90          95
Asp Phe Asp Lys Leu Gln Ala Ser Phe Asn Cys Leu Lys Ser Asp Tyr
          100          105          110
Glu Ser Leu Leu Asn Glu Lys Glu Lys Leu Lys Ala Glu Val Ile His
          115          120          125
Leu Thr His Gln Leu Glu Gln Arg Ser Asn Gly Ile Leu Asn His Ser
          130          135          140
Thr Tyr Leu Asn Asn Cys Thr
          145          150

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&lt;210&gt; 652

&lt;211&gt; 85

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 652

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Thr Ala Lys Leu Lys Ser Ser Ile Phe Leu Leu Pro Leu His Gln Arg
 1          5          10          15
Leu Ile Leu Lys Lys Ile Glu Arg Gln Gln Val Phe Arg Asp Gly Phe
          20          25          30
Leu Val Leu Leu Glu Gly Gly Leu Ala Met Gly Ile Glu Glu Ala Thr
          35          40          45
Lys Arg Gln Ser Ile Phe Ser Tyr Pro Glu Asp Leu Tyr Asn Glu Glu
          50          55          60
Tyr Tyr Asp Asp Gln Ala Pro Glu Lys Lys Arg Arg Leu Thr Pro Glu
          65          70          75          80
Gln Val His Leu Leu
          85

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&lt;210&gt; 653

&lt;211&gt; 99

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 653

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Met Glu Trp Glu Lys Gln Glu Gln His His Pro His His His His His
 1          5          10          15
Pro His His His Pro Gln Gln Gln Gln Gln His His Gln Gln Gln Gln
          20          25          30
Gln Pro Gln Gln Gln Gln Gln Ala Lys Glu Ala Gln Gln Gln Gln
          35          40          45
Gln Gln Gly Gly Glu Gly Met Gly Asn Gly Thr Ala Ala Gly Asn Gly
          50          55          60
Gly Gly Val Leu Tyr Val Lys Val Met Thr Asp Glu Gln Leu Glu Thr
          65          70          75          80
Leu Arg Lys Gln Ile Ala Val Tyr Ala Ser Ile Cys Glu Gln Leu Val
          85          90          95
Glu Met His

```

<210> 654  
 <211> 150  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 654  
 Ala Arg Gly Pro Val Leu Leu Ala Glu Tyr Thr Glu Phe Ser Gly Asn  
 1 5 10 15  
 Phe Thr Ser Val Ala Ser Gln Cys Leu Gln Lys Leu Pro Ala Thr Ser  
 20 25 30  
 Asn Lys Phe Thr Tyr Asn Cys Asp Gly His Thr Phe Asn Tyr Leu Val  
 35 40 45  
 Asp Asp Gly Leu Thr Tyr Cys Val Val Ala Val Glu Ser Val Gly Arg  
 50 55 60  
 Gln Ile Pro Met Ala Phe Leu Glu Arg Ile Lys Glu Asp Phe Thr His  
 65 70 75 80  
 Arg Tyr Asp Ala Gly Lys Ala Ala Thr Ala Ser Ala Asn Ser Leu Asn  
 85 90 95  
 Arg Glu Phe Gly Pro Lys Leu Lys Glu His Met Gln Tyr Cys Val Asp  
 100 105 110  
 His Pro Glu Glu Ile Ser Lys Leu Ala Lys Val Lys Ala Gln Val Ser  
 115 120 125  
 Glu Val Lys Gly Val Met Met Glu Asn Ile Glu Lys Val Leu Asp Arg  
 130 135 140  
 Gly Glu Lys Ile Glu Leu  
 145 150

<210> 655  
 <211> 96  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 655  
 Leu Gln Tyr Asp Trp His His Leu Ser Phe Cys Val Ile Ile Ser Val  
 1 5 10 15  
 Leu Asn Leu Gln Asn Thr Ile Asn Gly Ser Cys Ser Met Glu Ser Ile  
 20 25 30  
 Leu Glu Arg Tyr Glu Arg Tyr Thr Tyr Ala Glu Arg Gln Gln Val Ala  
 35 40 45  
 Thr Asp Ser Pro Gln Val Gln Gly Ser Trp Ser Leu Glu Tyr Pro Lys  
 50 55 60  
 Leu Val Ala Arg Ile Glu Val Leu Gln Arg Asn Ile Arg Asn Leu Ser  
 65 70 75 80  
 Gly Glu Glu Leu Asp Pro Leu Ser Leu Arg Glu Leu Gln Tyr Leu Glu  
 85 90 95

<210> 656  
 <211> 338  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 656  
 Met Ala Thr Tyr Tyr His Gln Ser Ser Ser Asp Pro Asp Gly Ala Leu  
 1 5 10 15  
 Gln Thr Leu Val Leu Met Asn Pro Ala Ser Tyr Val His Tyr Ser Asp  
 20 25 30  
 Ala Pro Pro Pro His Gln Gln Pro Ser Ala Ile Phe Leu Asn Ser Ser  
 35 40 45  
 Thr Ala Gly Pro Pro Ala Ser Gln Thr Gln Gln Phe Val Gly Ile Pro  
 50 55 60

Leu Pro Gly Ser Ala Ala Asp Ser Gln Pro Ser Ser Met His Val Asn  
 65 70 75 80  
 His Asp Leu Ser Ser Met His Gly Phe Met Pro Arg Val Gln Tyr Asn  
 85 90 95  
 Leu Trp Ser Ser Leu Asp Pro Ser Thr Ala Ala Arg Glu Ala Ser Arg  
 100 105 110  
 Thr His Gln Gln Gln Gly Leu Ser Leu Ser Leu Ser Pro Gln Gln Pro  
 115 120 125  
 Pro Pro Thr Pro Ala Gly Tyr Arg Ser Phe Val Arg Ala Glu Arg Ser  
 130 135 140  
 Gly Asp Gly Ala Ala Gly Ser Gln His Pro Pro Ala Ile Ser Gly Gly  
 145 150 155 160  
 Glu Asp Val Arg Ile Ser Gly Gly Ser Pro Ser Ser Ala Ser Gly Val  
 165 170 175  
 Thr Asn Gly Ala Ala Val Gly Ser Gly Met Gln Gly Val Leu Leu Ser  
 180 185 190  
 Ser Lys Tyr Leu Lys Ala Ala Gln Glu Leu Leu Glu Glu Val Val Asn  
 195 200 205  
 Val Gly Asn Thr Gly Ile Lys Ala Glu Met Leu Lys Lys Ala Ser Gly  
 210 215 220  
 Gln Ser Lys Pro Gly Gly Glu Ser Ala Ala Leu Lys Glu Glu Gly Gly  
 225 230 235 240  
 Gly Asp Gly Ser Gly Lys Arg Gly Ala Glu Leu Ser Met Ala Glu Arg  
 245 250 255  
 Gln Glu Ile Gln Met Lys Lys Ala Lys Leu Ile Asn Met Leu Asp Glu  
 260 265 270  
 Val Glu Gln Arg Tyr Arg Gln Tyr His Asn Gln Met Gln Ile Val Ile  
 275 280 285  
 Ser Ser Phe Glu Gln Ala Ala Gly Ile Gly Ser Ala Arg Thr Tyr Thr  
 290 295 300  
 Ala Leu Ala Leu Gln Thr Ile Ser Lys Gln Phe Arg Cys Leu Lys Asp  
 305 310 315 320  
 Ala Ile Ala Gly Gln Ile Arg Ala Ala Asn Lys Ser Leu Gly Glu Glu  
 325 330 335  
 Asp Gly

<210> 657  
 <211> 123  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 657  
 Val Glu Gln Val Gln Phe Leu Glu Lys Ser Phe Glu Val Glu Asn Lys  
 1 5 10 15  
 Leu Glu Pro Asp Arg Lys Ile Gln Leu Ala Lys Asp Leu Gly Leu Gln  
 20 25 30  
 Pro Arg Gln Val Ala Ile Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys  
 35 40 45  
 Thr Lys Gln Leu Glu Lys Asp Tyr Glu Thr Leu Gln Ala Ser Phe Asn  
 50 55 60  
 Thr Leu Lys Ser Asp Tyr Asp Thr Leu Ile Lys Glu Arg Asn Asp Leu  
 65 70 75 80  
 Lys Ala Glu Val Leu Asn Leu Thr Asp Lys Leu Leu His Lys Gly Asn  
 85 90 95  
 Glu Lys Glu Ser Ser Glu Ser Ser Ser Lys Ser Ser Gln Gly Leu Phe  
 100 105 110  
 Gln Asn Pro Ile Ala Asp Ser Val Ser Glu Asp  
 115 120

<210> 658



<211> 128  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 658  
 Ala Ile Ile Ser Ser Asp Gln Met Glu Arg Arg Met Leu Glu Ala Ala  
 1 5 10 15  
 Arg Lys Gly Asn Val His Glu Leu Glu Asp Leu Ile Ser Ser Asn Glu  
 20 25 30  
 Leu Ile Leu Glu Glu Met Asp Leu Glu Gly Ala Gly His Thr Pro Leu  
 35 40 45  
 His Val Ala Cys Val Ala Gly His Leu Asp Phe Val Arg Glu Leu Leu  
 50 55 60  
 Lys Arg Thr Pro Lys Leu Ala Glu Lys Val Asn Thr Asp Gly Phe Ser  
 65 70 75 80  
 Pro Leu His Ile Ala Ala Ala Arg Gly Asp Val Glu Ile Ala Arg Glu  
 85 90 95  
 Leu Leu Thr Met Gly Pro His Leu Cys Ser Val Lys Gly Arg Glu Arg  
 100 105 110  
 Arg Ile Pro Leu His Tyr Ala Ala Met Asn Gly Lys Val Asp Val Met  
 115 120 125

<210> 659  
 <211> 159  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 659  
 Arg Leu Ser Lys Asp Gln Ser Ala Val Leu Glu Glu Ser Phe Lys Glu  
 1 5 10 15  
 His Asn Thr Leu Asn Pro Lys Gln Lys Leu Ala Leu Ala Lys Gln Leu  
 20 25 30  
 Gly Leu Arg Pro Arg Gln Val Glu Val Trp Phe Gln Asn Arg Arg Ala  
 35 40 45  
 Arg Thr Lys Leu Lys Gln Thr Glu Val Asp Cys Glu Tyr Leu Lys Arg  
 50 55 60  
 Cys Cys Glu Ser Leu Thr Glu Glu Asn Arg Arg Leu Gln Lys Glu Val  
 65 70 75 80  
 Gln Glu Leu Arg Ala Leu Lys Leu Ser Pro Gln Phe Tyr Met His Leu  
 85 90 95  
 Ser Pro Pro Thr Thr Leu Thr Met Cys Pro Ser Cys Glu Arg Val Ala  
 100 105 110  
 Ala Pro Ser Pro Pro Ser Ala Val Gly Arg Pro Leu Ala Ala Val Pro  
 115 120 125  
 Ala His Pro Arg Pro Val Pro Leu Ile Asn Pro Trp Ala Pro Ala Ala  
 130 135 140  
 Ala Leu Glu Ile Val Asp Pro Pro Gly Leu Gln Glu Phe Asp Ile  
 145 150 155

<210> 660  
 <211> 115  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 660  
 Met Ala Arg Glu Lys Ile Lys Ile Lys Lys Ile Asp Asn Val Thr Ala  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Arg Gly Leu Phe Lys Lys Ala  
 20 25 30  
 Gly Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Val Val Ile Phe  
 35 40 45

Ser Ala Thr Gly Lys Leu Phe Glu Tyr Ser Ser Ser Ser Met Lys Asp  
 50 55 60  
 Thr Leu Glu Arg Tyr Thr Leu His His Asn Asn Leu Glu Asn Met Asp  
 65 70 75 80  
 Gln Pro Ser Leu Glu Leu Gln Leu Glu His Ser Asn Asn Met Arg Leu  
 85 90 95  
 Ser Lys Glu Val Ala Glu Lys Ser His Arg Leu Arg Gln Leu Arg Gly  
 100 105 110  
 Glu Asp Leu  
 115

<210> 661  
 <211> 118  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 661  
 Gln Val Ala Val Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys  
 1 5 10 15  
 Gln Leu Glu Arg Asp Tyr Asp Tyr Leu Lys Ser Ser Tyr Asp Ser Leu  
 20 25 30  
 Leu Ser Asp Tyr Asp Ser Ile Leu Lys Glu Asn Glu Lys Leu Lys Leu  
 35 40 45  
 Glu Val Tyr Ser Leu Thr Glu Lys Leu Gln Gly Lys Glu Val Asp Gly  
 50 55 60  
 Ala Pro Met Thr Gly Pro Ser Glu Pro Ala Pro Leu Glu Glu Ala Asp  
 65 70 75 80  
 Val Gln Ala Val Gln Phe Ser Ala Lys Val Glu Asp Arg Leu Ser Thr  
 85 90 95  
 Arg Ser Gly Gly Ser Ala Val Ile Asp Glu Glu Gly Pro Gln Leu Val  
 100 105 110  
 Asp Ser Gly Asn Ser Tyr  
 115

<210> 662  
 <211> 74  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 662  
 Met Glu Ala Gly Arg Phe Leu Phe Asp Pro Pro Ala Leu Gln Gly Asn  
 1 5 10 15  
 Ile Leu Phe Leu Asp Lys Gly Ser Arg Ser Met Met Gly Met Glu Glu  
 20 25 30  
 Ser Pro Lys Arg Arg Arg Phe Phe Cys Ser Pro Asp Glu Leu Phe Asp  
 35 40 45  
 Glu Glu Tyr Tyr Asp Glu Gln Met Pro Glu Lys Lys Arg Arg Leu Thr  
 50 55 60  
 Pro Glu Gln Val Leu Leu Leu Glu Lys Ser  
 65 70

<210> 663  
 <211> 152  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 663  
 Met Tyr Gly Leu Cys Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly Gly  
 1 5 10 15  
 Glu Glu Tyr Ser Glu Arg Ala Leu Met Ser Pro Glu Asn Leu Val Leu  
 20 25 30

Pro Ser Glu Tyr Gln Ala Trp Leu Cys Ser Ala Gly Phe Arg Asp Asn  
           35                          40                          45  
 Arg Ile Pro Met Tyr Gly Phe Gly Ser Glu Glu Phe Val Ser Ser Ala  
           50                          55                          60  
 Ser Gly Met Ser Glu Thr Ala Ser Val Thr Pro Asp Gln Glu Asp Ala  
           65                          70                          75                          80  
 Ala Glu Thr Ala Ile Lys Ser Lys Ile Lys Ser His Pro Ser Tyr Pro  
                           85                          90                          95  
 Arg Leu Leu His Ala Tyr Ile Asp Cys Gln Lys Val Gly Ala Pro Pro  
                           100                          105                          110  
 Glu Val Val Gly Leu Leu Asp Glu Ile Arg Pro Glu Asn Gly Val Cys  
                           115                          120                          125  
 Lys Arg Asp Ala Ala Val Ser Thr Cys Leu Gly Ala Asp Pro Glu Leu  
           130                          135                          140  
 Asp Glu Phe Met Glu Thr Tyr Thr  
           145                          150

<210> 664  
 <211> 56  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 664  
 Met Ala Leu Ala Met His Arg Glu Cys Ser Ser Lys Gln Met Asp Ala  
           1                          5                          10                          15  
 Ser Lys Tyr Val Arg Tyr Thr Pro Glu Gln Val Glu Ala Leu Glu Arg  
                           20                          25                          30  
 Val Tyr Asn Glu Cys Pro Lys Pro Ser Ser Leu Arg Arg Gln Gln Leu  
                           35                          40                          45  
 Ile Arg Glu Cys Pro Ile Leu Cys  
           50                          55

<210> 665  
 <211> 135  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 665  
 Met Ala Gly Glu Glu Pro Tyr Ser Ala Asp Thr Asn Ser Asp Thr Phe  
           1                          5                          10                          15  
 Ala Asp Glu Glu Thr Leu Ile Pro Ser Ser Ser Glu Ala Leu Glu Ser  
                           20                          25                          30  
 Ala Trp Val Pro Thr Ser Ser Thr Ala His His Gly Ser Lys Ser Val  
                           35                          40                          45  
 Val Asn Phe Glu Asp Val Cys Gly Gly Gly Asp Thr Asn Thr Ala Pro  
           50                          55                          60  
 Arg Pro Tyr Leu Arg Gln Ile Asp Leu Lys Glu Glu Ala Val Glu Glu  
           65                          70                          75                          80  
 Asp Tyr Gly Asp Gly Asn Phe Gln Pro Pro Gly Lys Lys Arg Arg Leu  
                           85                          90                          95  
 Ser Ala Asp Gln Val His Phe Leu Glu Arg His Phe Glu Val Glu Asn  
                           100                          105                          110  
 Lys Leu Glu Pro Glu Arg Lys Ile Gln Leu Ala Lys Asp Leu Gly Leu  
                           115                          120                          125  
 Gln Pro Arg Gln Val Ala Ile  
           130                          135

<210> 666  
 <211> 226  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 666  
 Ser Ala Ala Ser Leu Lys Ala Ser Pro Phe Gly Tyr Pro Gly Met Arg  
 1 5 10 15  
 Pro Thr Arg Phe Thr Gly Ser Gln Ile Ile Met Pro Leu Gly His Thr  
 20 25 30  
 Ile Glu His Glu Glu Met Leu Glu Val Ile Arg Leu Glu Gly His Ser  
 35 40 45  
 Leu Ala Gln Glu Asp Ala Phe Val Ser Arg Asp Ile His Leu Leu Gln  
 50 55 60  
 Ile Cys Ser Gly Ile Asp Glu Asn Ala Val Gly Val Cys Ser Glu Leu  
 65 70 75 80  
 Ile Phe Ala Pro Ile Asp Glu Met Phe Pro Asp Asp Ala Pro Leu Leu  
 85 90 95  
 Pro Ser Gly Phe Arg Ile Ile Pro Leu Asp Ser Lys Ser Ser Asp Val  
 100 105 110  
 Gln Asp Ser Leu Thr Thr Asn Arg Thr Leu Asp Leu Thr Ser Ser Leu  
 115 120 125  
 Glu Val Gly Pro Ala Ser Thr Asn Cys Val Gly Asp Val Ala Pro Ser  
 130 135 140  
 His Gly Ala Arg Ser Val Leu Thr Ile Ala Phe Gln Phe Pro Phe Asp  
 145 150 155 160  
 Ala Asn Thr Gln Asp Asn Val Ala Val Met Ala Arg Gln Tyr Val Arg  
 165 170 175  
 Ser Val Ile Ser Ser Val Gln Arg Val Ala Met Val Ile Ser Pro Ser  
 180 185 190  
 Gly Leu Gly Pro Ser Ile Asn Pro Lys Leu Ser Gln Gly Ser Pro Glu  
 195 200 205  
 Ala Leu Thr Leu Ala Asn Trp Ile Cys Gln Ser Tyr Arg His Val Leu  
 210 215 220  
 Ile Ile  
 225

<210> 667  
 <211> 147  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 667  
 Val Leu Leu Arg Phe Leu Thr Thr Ala Thr Thr Ile Cys Asn Asn Asn  
 1 5 10 15  
 Ala Gly Gly Ser Gly Ser Gly Ser Gly Ser Gly Cys Phe Phe Met Asp  
 20 25 30  
 Asn Asp Val Lys Ala Lys Ile Met Ala His Pro His Tyr His Arg Leu  
 35 40 45  
 Leu Ser Ala Tyr Val Asn Cys Gln Lys Val Gly Ala Pro Pro Gly Val  
 50 55 60  
 Val Ala Lys Leu Glu Glu Ala Cys Ala Ser Ala Ala Ile Met Ala Gly  
 65 70 75 80  
 Asn Ser Gly Met Ser Asn Thr Gly Cys Ile Gly Glu Asp Pro Ala Leu  
 85 90 95  
 Asp Gln Phe Met Glu Ala Tyr Cys Glu Met Leu Thr Lys Tyr Glu Gln  
 100 105 110  
 Glu Leu Ser Lys Pro Phe Lys Glu Ala Met Leu Phe Leu Gln Arg Ile  
 115 120 125  
 Glu Cys Gln Phe Lys Ala Leu Thr Leu Gly Val Pro Ser Asp Ser Val  
 130 135 140  
 Ala Leu Ser  
 145

<210> 668

<211> 176  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 668  
 Gly Ser Ser Lys Gly Val Gly Ile Pro Arg Leu Arg Phe Leu Asp Gln  
 1 5 10 15  
 Gln Leu Arg Gln Gln Arg Ala Leu Gln Gln Leu Gly Met Met Gln Gln  
 20 25 30  
 His Ala Trp Arg Pro Gln Arg Gly Leu Pro Glu Ser Ser Val Ser Ile  
 35 40 45  
 Leu Arg Ala Trp Leu Phe Glu His Phe Leu His Pro Tyr Pro Lys Asp  
 50 55 60  
 Ser Asp Lys Ile Leu Leu Ala Arg Gln Thr Gly Leu Thr Arg Ser Gln  
 65 70 75 80  
 Val Ser Asn Trp Phe Ile Asn Ala Arg Val Arg Leu Trp Lys Pro Met  
 85 90 95  
 Val Glu Glu Met Tyr Lys Glu Glu Ile Gly Asp Ala Glu Met Asp Ser  
 100 105 110  
 Asn Ser Ser Ser Asp Thr Ala Lys Pro Lys Thr Gly Asp Ile Lys Ser  
 115 120 125  
 Ser Met Glu Asp Arg Val Glu Glu Val Gln Gln Ser Ser Thr Ala Thr  
 130 135 140  
 Gln Arg Cys Ser Ser Gly Gln Leu Met Asp Ser Ser Phe Asp Arg Thr  
 145 150 155 160  
 Pro Asp Val Glu Met Ala Gly His Ser Val Gly Phe Asn Tyr Leu Asn  
 165 170 175

<210> 669  
 <211> 294  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 669  
 Met Ser Glu Val Gln Val Thr Gln Met Lys Ser Asp Gly Thr Leu Glu  
 1 5 10 15  
 Glu Ser Gly Glu Ala Arg Arg Leu Arg Asn Ser Leu Glu Glu Met Ala  
 20 25 30  
 Asn Glu Gly Lys Ser Pro Ser Ile Leu Lys Glu Cys Gly Leu Pro Glu  
 35 40 45  
 Asn Ser Phe Val Ser Ile Pro Gln Lys Met Thr Glu Asn Arg Trp Ser  
 50 55 60  
 Trp Ser Glu Val Lys Tyr Leu Ser Asn Cys Leu Leu Leu Ala Leu Asp  
 65 70 75 80  
 Ala Ser Leu Glu His Ser Leu Leu Gly Ser Leu Met Asn Met Asp Arg  
 85 90 95  
 Tyr Ala Ala Ala Glu Ser Tyr His Lys Leu Ala Met Ala Phe Ala Pro  
 100 105 110  
 Val Pro Asp Leu His Ile Met Trp Leu Leu His Leu Cys Asp Ala His  
 115 120 125  
 Gln Glu Met Gln Ser Trp Ala Glu Ala Ala Gln Cys Ala Val Ala Val  
 130 135 140  
 Ala Gly Val Val Met Gln Ala Leu Val Ala Arg Asn Asp Gly Val Trp  
 145 150 155 160  
 Ser Lys Asp His Val Thr Ala Leu Arg Lys Ile Cys Pro Met Val Ser  
 165 170 175  
 Ser Glu Ile Ser Cys Glu Ala Ser Ala Ala Glu Val Glu Gly Tyr Gly  
 180 185 190  
 Ala Ser Lys Leu Thr Val Asp Ser Ala Val Lys Tyr Leu Gln Leu Ala  
 195 200 205  
 Asn Lys Leu Phe Ser Gln Ala Glu Leu Tyr His Phe Cys Ala Ser Ile

210	215	220
Leu Glu Leu Val Ile Pro Val Tyr Lys Ser Arg Arg Ala Tyr Gly Gln		
225	230	235
Leu Ala Lys Cys His Thr Leu Leu Thr Asn Ile Tyr Glu Ser Ile Leu		240
	245	250
Glu Gln Glu Ser Ser Pro Ile Pro Phe Thr Asp Ala Thr Tyr Tyr Arg		255
	260	265
Val Gly Phe Tyr Gly Glu Lys Phe Gly Lys Leu Asp Arg Lys Glu Tyr		270
	275	280
Val Tyr Arg Glu Pro Arg		285
290		

<210> 670  
 <211> 144  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 670
His Thr Lys Thr His His His His Ser Ile Ala Ile Ser Asn Pro Thr
1 5 10 15
Lys Ser Met Ser Gln Asp Tyr His His Pro Ser Ile Phe Ala Phe Ser
20 25 30
Asn Asn Gly Phe Glu Arg Pro Asp Val Ala Ala Ala Ser Ala Ala Ser
35 40 45
Asp Gln Glu Gln Gln His His Val Ala Gln Gln Ile Cys Arg Asp Lys
50 55 60
Leu Arg Val Gln Gly Phe Asp Gln Pro Pro Pro Gln Leu Val Gly
65 70 75 80
Met Glu Glu Glu Pro Gly Gly Leu Pro Ala Tyr Glu Thr Ala Gly Met
85 90 95
Leu Ser Glu Met Phe Asn Phe Pro Pro Gly Gly Ala Ala Ala Ala Glu
100 105 110
Leu Leu Glu Gln Pro Met Ala Ser Gly Tyr Arg Ala Ala Arg Pro Ser
115 120 125
Leu Pro Thr Val Ser Gly Thr Ala Gln Lys Thr Gln Val Cys Ile Gly
130 135 140

<210> 671  
 <211> 125  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 671
Ile Val Asp His Met Asp Leu Glu Pro Trp Ser Val Pro Glu Val Leu
1 5 10 15
Arg Pro Leu Tyr Glu Ser Ser Thr Leu Leu Ala Gln Arg Thr Thr Met
20 25 30
Ala Ala Leu Arg Asn Leu Arg Gln Ile Ser Gln Glu Val Ser Gln Pro
35 40 45
Asn Val Thr Gly Trp Gly Arg Arg Pro Ala Ala Leu Arg Ala Leu Gly
50 55 60
Gln Arg Leu Ser Lys Gly Phe Asn Glu Ala Val Asn Gly Phe Met Asp
65 70 75 80
Asp Gly Trp Ser Met Leu Glu Ser Asp Gly Val Asp Asp Val Thr Leu
85 90 95
Leu Ile Asn Ser Ser Pro Ala Lys Met Ala Gly Val Asn Ile Ser Tyr
100 105 110
Ala Ser Gly Phe Pro Ser Met Thr Ser Ala Val Leu Cys
115 120 125

<210> 672

<211> 104  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 672  
 Met Ala Thr Ala Phe Ala Gly Thr Gln Gln Lys Cys Lys Ala Cys Asp  
 1 5 10 15  
 Lys Thr Val Tyr Leu Val Asp Gln Leu Thr Ala Asp Asn Lys Val Phe  
 20 25 30  
 His Lys Ala Cys Phe Arg Cys His His Cys Lys Gly Thr Leu Lys Leu  
 35 40 45  
 Ser Asn Tyr Cys Ser Phe Glu Gly Val Leu Tyr Cys Lys Pro His Phe  
 50 55 60  
 Asn Gln Leu Phe Lys Met Thr Gly Ser Leu Asp Lys Ser Phe Glu Gly  
 65 70 75 80  
 Thr Pro Lys Thr Val Asn Arg Ser Ser Glu Gln Gly Gln Ser Asn Ala  
 85 90 95  
 Lys Val Ser Ser Met Phe Ala Gly  
 100

<210> 673  
 <211> 131  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 673  
 Asp Asp Asp Glu Asp Asp Asp Leu Phe Gln Asp Arg Phe Ser Ile Ala  
 1 5 10 15  
 Tyr Asn Leu Asp Arg Glu Phe Gly Pro Arg Leu Lys Glu His Met Gln  
 20 25 30  
 Tyr Cys Met Ser His Pro Glu Glu Met Ser Lys Leu Ser Lys Leu Lys  
 35 40 45  
 Ala Gln Ile Ser Glu Val Lys Gly Ile Met Val Asp Asn Ile Glu Lys  
 50 55 60  
 Val Leu Asp Arg Gly Glu Arg Ile Glu Leu Leu Val Asp Lys Thr Glu  
 65 70 75 80  
 Asn Leu Gln Phe Gln Ala Asp Ile Phe Gln Arg Gln Gly Arg Gln Leu  
 85 90 95  
 Arg Arg Lys Met Trp Phe Gln Asn Leu Gln Met Lys Val Val Val Ala  
 100 105 110  
 Gly Ala Val Val Ile Val Ile Phe Leu Leu Trp Leu Ile Ala Lys Trp  
 115 120 125  
 Gly Ser Lys  
 130

<210> 674  
 <211> 90  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 674  
 Met Ala Thr Ala Phe Ala Gly Thr Gln Gln Lys Cys Lys Ala Cys Asp  
 1 5 10 15  
 Lys Thr Val Tyr Leu Val Asp Gln Leu Thr Ala Asp Asn Lys Val Phe  
 20 25 30  
 His Lys Ala Cys Phe Arg Cys His His Cys Lys Gly Thr Leu Lys Leu  
 35 40 45  
 Ser Asn Tyr Cys Ser Phe Glu Gly Val Leu Tyr Cys Lys Pro His Phe  
 50 55 60  
 Asn Gln Leu Phe Lys Met Thr Gly Ser Leu Asp Lys Ser Phe Glu Gly  
 65 70 75 80

Thr Pro Lys Thr Val Asn Arg Ser Ser Glu  
85 90

<210> 675  
<211> 95  
<212> PRT  
<213> Eucalyptus grandis

<400> 675  
Val Tyr Ala Pro Ile Asp Ser Thr Ala Met Thr Ile Ala Leu Ser Gly  
1 5 10 15  
Glu Asp Thr Ser Thr Val Gln Ile Leu Pro Ser Gly Phe Thr Ile Ser  
20 25 30  
Ser Asp Gly Arg Ile Gly Thr Ser Ser Ser Lys Pro Ala Gly Thr Leu  
35 40 45  
Leu Thr Val Ala Phe Gln Ile Leu Val Ser Ser His Ser Gly Pro Glu  
50 55 60  
Gln Leu Ser Val Glu Ser Val Ala Thr Val Asn Thr Leu Ile Ser Ala  
65 70 75 80  
Thr Val Gln Lys Ile Lys Ala Ala Leu Asn Trp Ser Ala Ala Glu  
85 90 95

<210> 676  
<211> 141  
<212> PRT  
<213> Eucalyptus grandis

<400> 676  
Gln Met Glu Arg Ala Ala Arg Lys Gly Asn Ile His Glu Leu Asn Asp  
1 5 10 15  
Leu Ile Ser Ser Asn Glu Gln Ile Leu Glu Glu Met Ala Leu Glu Gly  
20 25 30  
Ala Gly His Thr Pro Leu His Ile Ala Cys Met Gly Gly His Leu Asp  
35 40 45  
Phe Ile Arg Glu Leu Leu Lys His Met Pro Lys Leu Ala Glu Lys Val  
50 55 60  
Asn Pro Cys Gly Phe Ser Pro Leu His Ile Ala Ala Arg Gly Asp  
65 70 75 80  
Val Glu Ile Ala Lys Glu Leu Leu Lys Val Asn Thr Asp Leu Cys Ser  
85 90 95  
Val Glu Gly Arg Glu Arg Arg Ile Pro Leu His Asp Ala Val Ile His  
100 105 110  
Gly Glu Val Asp Val Met Glu Ile Leu Leu Ser Thr Ser Pro Glu Ser  
115 120 125  
Val Glu Lys Lys Thr Ala Arg Lys Glu Thr Val Leu His  
130 135 140

<210> 677  
<211> 121  
<212> PRT  
<213> Eucalyptus grandis

<400> 677  
Pro Ser Asp Ile Phe Leu Leu Gln Leu Cys Asn Gly Val Asp Glu Asn  
1 5 10 15  
Ala Val Gly Thr Cys Ala Glu Leu Leu Phe Ala Pro Ile Asp Ala Ser  
20 25 30  
Phe Ser Asp Asp Ala Pro Ile Ile Pro Ser Gly Phe Arg Ile Ile Pro  
35 40 45  
Leu Asp Pro Gly Ser Asp Ala Phe Ser Pro Asn Arg Thr Leu Asp Leu  
50 55 60



Ala Ser Ala Leu Asp Val Gly Pro Thr Gly Asn Lys Ala Val Gly Asp  
 65 70 75 80  
 Asn Ser Gly His Ser Gly Asn Thr Lys Ser Val Met Thr Ile Ala Phe  
 85 90 95  
 Gln Phe Ala Phe Glu Leu His Leu Gln Glu Asn Val Ala Ser Met Ala  
 100 105 110  
 Arg Gln Tyr Leu Arg Ser Ile Ile Ala  
 115 120

<210> 678  
 <211> 34  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 678  
 Met Gly Ile Asp Asp Leu Cys Asn Thr Gly Leu Val Leu Ser Leu Gly  
 1 5 10 15  
 Leu Glu Thr Pro Phe Lys Ile Glu Ala Gln Arg Gln Ala Lys Gln Arg  
 20 25 30  
 Leu Asn

<210> 679  
 <211> 110  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 679  
 Ile Asn Ala Pro Glu Ser Asp Pro Ser Leu Thr Pro Ala Ile Asn Arg  
 1 5 10 15  
 His Pro Phe Ser Glu Thr Gln Ala Thr Thr Leu Leu Gln Ala Thr Thr  
 20 25 30  
 Ala Met Ile Ser Ser Ala Val Gln Val Ala Gly Pro Ala His Ile Asp  
 35 40 45  
 Asp Pro Cys Arg Arg Ser Ile Gly Gly Ser Thr Gly Leu Gly Gly Ala  
 50 55 60  
 Thr Asp Ile Gly Ser Ala Leu Ile Arg Phe Gly Thr Ala Ala Ala Ala  
 65 70 75 80  
 Thr Gly Asp Val Ser Leu Thr Leu Gly Leu Arg His Ala Gly Asn Val  
 85 90 95  
 Pro Glu Lys Ser Ser Phe Ser Val Thr Asp Leu Gly Gly Cys  
 100 105 110

<210> 680  
 <211> 146  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 680  
 Phe Asn Glu Gly Asn Gly Thr Pro Ser Lys Gln Lys Ile Lys Glu Ile  
 1 5 10 15  
 Thr Thr Glu Leu Ser Gln His Gly Gln Ile Ser Glu Thr Asn Val Tyr  
 20 25 30  
 Asn Trp Phe Gln Asn Arg Arg Ala Arg Ser Lys Arg Lys Met Gln Asn  
 35 40 45  
 Ala Thr Gly Asn Asn Thr Glu Ser Glu Ala Glu Ala Glu Val Glu Ser  
 50 55 60  
 Pro Lys Glu Met Lys Thr Lys Pro Glu Ile Phe Gln Ser Gln Gln Asn  
 65 70 75 80  
 Pro Val Ser Arg Asn Glu Asp Leu Cys Phe Gln Ser Pro Glu Ile Ser  
 85 90 95

Ser Asp Leu His Phe Ala Asp Ser Gln Thr Lys Val Glu Ser Met Val  
 100 105 110  
 Tyr Pro Asp Gly Ser Leu Arg Ser Arg Asn Arg Asn Leu Gly Gln Leu  
 115 120 125  
 Ser Phe Tyr Asp Ala Met Met Ser Asn Ser Gly Gly Leu Ala Gly Asn  
 130 135 140  
 Glu His  
 145

<210> 681  
 <211> 247  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 681  
 Pro Ile Asp Glu Ser Phe Ala Asp Asp Ala Pro Leu Leu Pro Ser Gly  
 1 5 10 15  
 Phe Arg Val Ile Gln Leu Asp Pro Lys Thr Asp Gly Pro Ala Pro Thr  
 20 25 30  
 Arg Thr Leu Asp Leu Ala Ser Thr Leu Glu Val Gly Ser Gly Gly Ala  
 35 40 45  
 Arg Pro Thr Cys Glu Ala Asp Ala Ser Thr Tyr Asn Leu Arg Ser Val  
 50 55 60  
 Leu Thr Ile Ala Phe Gln Phe Val Phe Glu Asn His Leu Arg Asp Thr  
 65 70 75 80  
 Val Ala Ile Met Ala Arg Gln Tyr Val Arg Ser Val Val Gly Ser Val  
 85 90 95  
 Gln Arg Val Ala Met Ala Ile Ala Pro Ser Arg Leu Gly Gly His Leu  
 100 105 110  
 Gly Pro Lys Ser Leu Ser Gly Ser Pro Glu Ala Leu Thr Leu Ala Arg  
 115 120 125  
 Trp Ile Cys Arg Ser Tyr Arg Ile Cys Ala Gly Ala Glu Leu Leu Arg  
 130 135 140  
 Gly Asp Ser Gln Ala Gly Asp Ala Val Leu Lys Glu Phe Trp His His  
 145 150 155 160  
 Ser Asp Ala Ile Met Cys Cys Ser Val Asn Thr Asn Val Ala Ser Pro  
 165 170 175  
 Val Phe Thr Phe Ala Asn Gln Ala Gly Leu Asp Met Leu Glu Thr Thr  
 180 185 190  
 Leu Val Ala Leu Gln Asp Ile Met Leu Glu Lys Val Leu Asp Glu Gly  
 195 200 205  
 Gly Arg Lys Val Leu Ser Ser Glu Phe Pro Lys Ile Met Gln Gln Gly  
 210 215 220  
 Ile Ala Tyr Leu Pro Ala Gly Val Cys Ile Ser Ser Met Gly Arg Pro  
 225 230 235 240  
 Val Ala Tyr Glu Gln Ala Val  
 245

<210> 682  
 <211> 147  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 682  
 Val Arg Leu Thr Lys Glu Gln Ser Ala Leu Leu Glu Glu Ser Phe Lys  
 1 5 10 15  
 Gln His Ser Thr Leu Asn Pro Lys Gln Lys Gln Ala Leu Ala Arg Gln  
 20 25 30  
 Leu Asn Leu Arg Pro Arg Gln Val Glu Val Trp Phe Gln Asn Arg Arg  
 35 40 45  
 Ala Arg Thr Lys Leu Lys Gln Thr Glu Val Asp Cys Glu Phe Leu Lys

50                      55                      60  
 Lys Cys Cys Glu Thr Leu Thr Asp Glu Asn Arg Arg Leu Gln Lys Glu  
 65                      70                      75                      80  
 Leu Gln Glu Leu Lys Ala Leu Lys Leu Ala Gln Pro Phe Tyr Met His  
                     85                      90                      95  
 Met Pro Ala Ala Thr Leu Thr Met Cys Pro Ser Cys Glu Arg Ile Gly  
                     100                      105                      110  
 Ala Gly Pro Ser Val Asp Gly Ala Ala Pro Thr Lys Gly Pro Phe Ser  
                     115                      120                      125  
 Met Thr Thr Lys Ser His Leu Tyr Ser His His Phe Thr Asn Pro Ser  
                     130                      135                      140  
 Ala Ala Cys  
 145

<210> 683  
 <211> 121  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 683  
 Pro Leu Glu Phe His Asn Asp Val Arg Leu Thr Phe Ser Asn Ala Met  
 1                      5                      10                      15  
 Thr Tyr Asn Pro Pro Ser Asn Asp Val His Leu Met Ala Asp Thr Leu  
                     20                      25                      30  
 Asn Lys Phe Phe Asp Ile Arg Trp Lys Thr Ile Glu Lys Lys Leu Val  
                     35                      40                      45  
 Val Gly Gly Pro Gln Pro Ser Ser Thr Lys Ser Ala Pro Pro Glu Glu  
                     50                      55                      60  
 Val Lys Ala Ala Lys Ser Thr Ala Leu Pro Lys Lys Arg Lys Met Ser  
 65                      70                      75                      80  
 Ser Gln Gln Glu Val Met Pro Ala Pro Leu Leu Gln Val Met Thr Asp  
                     85                      90                      95  
 Glu Glu Lys His Lys Leu Gly Gln Glu Leu Glu Ser Leu Leu Gly Glu  
                     100                      105                      110  
 Met Pro Glu Asn Ile Ile Asp Phe Leu  
                     115                      120

<210> 684  
 <211> 36  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 684  
 Met Gln Leu Tyr Ala Pro Thr Thr Leu Ala Pro Ala Arg Asp Phe Trp  
 1                      5                      10                      15  
 Leu Leu Arg Tyr Thr Ser Val Met Glu Asp Gly Ser Leu Val Val Cys  
                     20                      25                      30  
 Glu Arg Ser Ile  
                     35

<210> 685  
 <211> 120  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 685  
 Arg Glu Leu Lys Thr Gln Leu Leu Arg Lys Tyr Ser Gly Tyr Leu Gly  
 1                      5                      10                      15  
 Ser Leu Lys Gln Glu Phe Met Lys Lys Arg Lys Lys Gly Lys Leu Pro  
                     20                      25                      30  
 Lys Glu Ala Arg Gln Gln Leu Leu Asp Trp Trp Ser Arg His Tyr Lys

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      35              40              45
Trp Pro Tyr Pro Ser Glu Ser Gln Lys Leu Ala Leu Ala Glu Ser Thr
  50              55              60
Gly Leu Asp Gln Lys Gln Ile Asn Asn Trp Phe Ile Asn Gln Arg Lys
  65              70              75              80
Arg His Trp Lys Pro Ser Glu Asp Met Gln Phe Val Val Met Asp Ala
      85              90              95
Thr His Pro His Tyr Tyr Met Asp Asn Met Leu Gly Asn Pro Phe Pro
      100              105              110
Met Asp Ile Ser Pro Thr Leu Leu
      115              120

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<210> 686  
 <211> 93  
 <212> PRT  
 <213> Eucalyptus grandis

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      <400> 686
Trp Pro Phe Lys Glu Pro Val Asp Ala Arg Glu Val Pro Asp Tyr Tyr
  1              5              10              15
Asp Ile Ile Lys Asp Pro Met Asp Leu Lys Thr Met Thr Lys Arg Val
      20              25              30
Glu Ser Glu Gln Tyr Tyr Val Thr Leu Glu Met Phe Ile Ala Asp Val
      35              40              45
Lys Arg Met Phe Ala Asn Ala Arg Thr Tyr Asn Ser Pro Asp Thr Ile
      50              55              60
Tyr Phe Lys Ile Ala Thr Arg Leu Glu Ala His Phe Gln Ser Lys Val
      65              70              75              80
Gln Ser Asn Leu Gln Ser Gly Ala Gly Lys Ile Gln Gln
      85              90

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<210> 687  
 <211> 185  
 <212> PRT  
 <213> Eucalyptus grandis

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      <400> 687
Met Gly Arg Gly Lys Ile Glu Ile Lys Arg Ile Glu Asn Thr Thr Asn
  1              5              10              15
Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
      20              25              30
Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe
      35              40              45
Ser Ser Arg Gly Arg Leu Tyr Glu Tyr Ser Asn Asn Ser Ile Arg Ser
      50              55              60
Thr Ile Glu Arg Tyr Lys Lys Ala Asn Ser Asp Ser Ser Asn Thr Ser
      65              70              75              80
Thr Val Thr Glu Ile Asn Ala Gln Tyr Tyr Gln Gln Glu Ser Ala Lys
      85              90              95
Leu Arg Gln Gln Ile Gln Met Leu Gln Asn Ser Asn Arg His Leu Met
      100              105              110
Gly Asp Ser Leu Ser Ser Leu Ser Val Lys Glu Leu Lys Gln Leu Glu
      115              120              125
Asn Arg Leu Glu Arg Gly Ile Thr Arg Ile Arg Ser Lys Lys His Glu
      130              135              140
Met Leu Leu Thr Glu Ile Glu Tyr Leu Gln Lys Lys Glu Ile Glu Leu
      145              150              155              160
Glu Asn Glu Ser Val Phe Leu Arg Thr Lys Ile Ala Glu Val Asp Arg
      165              170              175
Ile Gln Gln Gly Asn Met Val Ala Ala
      180              185

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<210> 688  
 <211> 130  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 688  
 Met Gly Arg Gly Lys Ile Glu Ile Lys Arg Ile Glu Asn Ala Asn Ser  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Ser Gly Leu Leu Lys Lys Ala  
 20 25 30  
 Gln Glu Leu Ser Ile Leu Cys Asp Ala Glu Val Ala Val Ile Ile Phe  
 35 40 45  
 Ser Asn Thr Gly Lys Leu Tyr Glu Phe Ser Ser Ser Gly Met Lys Gln  
 50 55 60  
 Ile Leu Ser Arg Tyr Asn Arg Cys Gln Asp Ser Pro Glu Ser Thr Val  
 65 70 75 80  
 Val Glu Tyr Lys Pro Glu Ser Thr Lys Glu Asp Asp Lys Val Val Asp  
 85 90 95  
 Thr Leu Lys Asp Glu Ile Ala Glu Leu Gln Met Arg Gln Leu Arg Leu  
 100 105 110  
 Leu Gly Lys Asp Leu Asn Gly Leu Ser Ile Lys Glu Leu Gln His Leu  
 115 120 125  
 Glu Gln  
 130

<210> 689  
 <211> 117  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 689  
 Leu Asp Thr Ala Leu Lys Arg Ile Arg Thr Arg Lys Asn Gln Leu Met  
 1 5 10 15  
 His Glu Ser Ile Ser Gln Leu Gln Lys Lys Glu Lys Ser Leu Gln Glu  
 20 25 30  
 Gln Asn Asn Val Leu Ser Lys Lys Ile Lys Glu Asn Glu Lys Val Met  
 35 40 45  
 Arg Glu Ser Gly Gln Trp Glu Gln Gln Thr Pro Ala Pro Thr Thr Ser  
 50 55 60  
 Ser Phe Met Leu Gln Pro Thr Leu Pro Leu Pro Ser Leu Thr Ile Gly  
 65 70 75 80  
 Asn Thr Phe Gln Thr Pro His Val Leu Gly Gly Ala Glu Gln Glu Glu  
 85 90 95  
 Arg Ser Gln Ala Arg Pro Ala Asn Thr Leu Met Pro Pro Trp Met Ile  
 100 105 110  
 Arg Arg Ser Asn Glu  
 115

<210> 690  
 <211> 140  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 690  
 Tyr Leu Ser Asp Leu Met Ser Ser Gly His Lys His Lys Arg Arg Lys  
 1 5 10 15  
 Gln Leu Gln Thr Val Glu Leu Lys Val Arg Met Asp Cys Asp Gly Cys  
 20 25 30  
 Glu Leu Lys Val Arg Lys Ala Leu Ser Ser Leu Asp Gly Val Lys Thr  
 35 40 45

Val Glu Ile Asn Arg Lys Gln Gln Lys Val Thr Val Asn Gly Tyr Val  
 50 55 60  
 Asp Gln Asn Lys Val Leu Lys Arg Ala Lys Ser Thr Gly Lys Lys Ala  
 65 70 75 80  
 Glu Ile Trp Pro Tyr Ile Pro Tyr Ser Val Val Ala His Gln Pro Tyr  
 85 90 95  
 Ile Ala Gln Ser Tyr Asp Lys Lys Ala Pro Pro Gly His Val Arg Lys  
 100 105 110  
 Val Glu Pro Thr Ala Thr Ser Ala Ile Val Thr Arg His Glu Asp Pro  
 115 120 125  
 Tyr Met Thr Leu Phe Ser Asp Asp Asn Pro Asn Ala  
 130 135 140

<210> 691  
 <211> 68  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 691  
 Arg Ile Glu Asn Lys Ile Asn Arg Gln Val Thr Phe Ala Lys Arg Lys  
 1 5 10 15  
 Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala  
 20 25 30  
 Glu Val Ala Leu Ile Ile Phe Ser Ser Arg Gly Lys Leu His Glu Phe  
 35 40 45  
 Cys Ser Gly Pro Arg Tyr Arg Val Phe Val Cys Tyr His Leu Phe Phe  
 50 55 60  
 Ser Leu Met Leu  
 65

<210> 692  
 <211> 140  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 692  
 Ile Asn Ala Gly Arg Phe Asp Gln Arg Thr Thr His Glu Glu Arg Arg  
 1 5 10 15  
 Leu Thr Leu Glu Thr Leu Leu His Asp Glu Glu Arg Tyr Gln Glu Thr  
 20 25 30  
 Val His Asp Val Pro Ser Leu Gln Glu Val Asn Arg Met Ile Ala Arg  
 35 40 45  
 Ser Glu Glu Glu Val Glu Leu Phe Asp Gln Met Asp Glu Glu Leu Asp  
 50 55 60  
 Trp Thr Glu Glu Met Thr Asn Tyr Glu Leu Val Pro Lys Trp Leu Arg  
 65 70 75 80  
 Ala Ser Thr Lys Glu Val Asn Ala Ala Ile Ala Thr Leu Ser Lys Lys  
 85 90 95  
 Pro Ser Lys Asn Thr Leu Phe Ala Ser Thr Ile Val Glu Pro Asn Glu  
 100 105 110  
 Pro Val Ser Glu Ser Val Arg Lys Arg Gly Arg Pro Lys Ser Lys Lys  
 115 120 125  
 His Pro Asn Tyr Lys Glu Leu Asp Asp Asp Asn Glu  
 130 135 140

<210> 693  
 <211> 126  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 693

Ala Ala Gln Leu Lys His Ser Cys Glu Leu Leu Gly Glu Lys Asp Gly  
 1 5 10 15  
 Ala Gly Ser Ser Gly Ile Thr Lys Gly Glu Thr Pro Arg Leu Lys Leu  
 20 25 30  
 Leu Asp Gln Ser Leu Arg Gln Gln Arg Ala Phe His Gln Met Gly Met  
 35 40 45  
 Met Glu Gln Glu Ala Trp Arg Pro Gln Arg Gly Leu Pro Glu Arg Ser  
 50 55 60  
 Val Asn Ile Leu Arg Ala Trp Leu Phe Glu His Phe Leu His Pro Tyr  
 65 70 75 80  
 Pro Ser Asp Ala Asp Lys His Leu Leu Ala Arg Gln Thr Gly Leu Ser  
 85 90 95  
 Arg Asn Gln Val Ser Asn Trp Phe Ile Asn Ala Arg Val Arg Leu Trp  
 100 105 110  
 Lys Pro Met Val Glu Glu Met Tyr Gln Gln Glu Ser Lys Glu  
 115 120 125

<210> 694  
 <211> 53  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 694  
 Phe Cys Ser Met Leu Lys Thr Leu Glu Arg Tyr Gln Lys Cys Asn Tyr  
 1 5 10 15  
 Gly Ala Leu Glu Pro Asn Val Ser Ala Arg Glu Ser Leu Glu Leu Ser  
 20 25 30  
 Cys Gln Gln Glu Tyr Leu Arg Leu Lys Ala Arg Tyr Glu Ala Leu Gln  
 35 40 45  
 Arg Thr Gln Arg Tyr  
 50

<210> 695  
 <211> 86  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 695  
 Lys Ile Glu Asp Val Arg Glu Glu Ile Leu Arg Lys Arg Arg Ala Gly  
 1 5 10 15  
 Lys Leu Pro Gly Asp Thr Thr Ser Val Leu Lys Asn Trp Trp Gln Gln  
 20 25 30  
 His Ser Lys Trp Pro Tyr Pro Thr Glu Asp Asp Lys Ala Lys Leu Val  
 35 40 45  
 Glu Glu Thr Gly Leu Gln Leu Lys Gln Ile Asn Asn Trp Phe Ile Asn  
 50 55 60  
 Gln Arg Lys Arg Asn Trp His Asn Asn Ser Gln Ser Val Thr Ser Leu  
 65 70 75 80  
 Lys Ser Lys Arg Lys Arg  
 85

<210> 696  
 <211> 99  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 696  
 Pro Val Asp Ile Thr Gly Met Gln Ala Val Met Thr Gly Cys Asp Ser  
 1 5 10 15  
 Ser Asn Ile Ala Ala Leu Pro Ser Gly Phe Ser Ile Leu Pro Asp Gly  
 20 25 30

Ile Glu Ser Arg Pro Leu Val Ile Ser Ser Arg His Glu Glu Lys Ser  
                   35                                  40                                  45  
 Ser Glu Gly Gly Ser Leu Leu Thr Ile Ala Phe Gln Ile Leu Thr Asn  
           50                                  55                                  60  
 Thr Ser Pro Thr Ala Lys Leu Thr Val Glu Ser Val Glu Ser Val Asn  
 65                                  70                                  75                                  80  
 Thr Leu Ile Ser Cys Thr Leu Arg Asn Ile Arg Thr Ser Leu Gln Cys  
                                   85                                  90                                  95  
 Glu Asp Gly

<210> 697  
 <211> 134  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 697  
 Glu Asn Lys Ile Asn Arg Gln Val Thr Phe Ala Lys Arg Arg Asn Gly  
   1                                  5                                  10                                  15  
 Leu Leu Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val  
                                   20                                  25                                  30  
 Ala Leu Ile Ile Phe Ser His Arg Gly Lys Leu Tyr Glu Phe Cys Ser  
                                   35                                  40                                  45  
 Ser Ser Ser Met Leu Lys Thr Leu Glu Arg Tyr Gln Lys Cys Asn Tyr  
                                   50                                  55                                  60  
 Gly Ala Pro Glu Pro Ser Ile Ser Thr Arg Glu Ala Gln Leu Glu Leu  
 65                                  70                                  75                                  80  
 Ser Ser Gln Gln Glu Tyr Leu Lys Leu Lys Ala Arg Tyr Glu Ala Leu  
                                   85                                  90                                  95  
 Gln Arg Thr Gln Arg Asn Leu Leu Gly Glu Glu Leu Gly Pro Leu Ser  
                                   100                                  105                                  110  
 Ser Lys Glu Leu Glu Ser Leu Glu Arg Gln Leu Asp Ser Ser Leu Lys  
                                   115                                  120                                  125  
 Gln Ile Arg Ser Thr Arg  
                                   130

<210> 698  
 <211> 145  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 698  
 Met Gln Glu Pro Asn Leu Ala Met Met Gly Gly Gly Gly Gly Gly Gly  
   1                                  5                                  10                                  15  
 Gly Gly Gly Gly Gly Ile Val Gly Gly Gly Gly Gly Gly Leu Gly Ser  
                                   20                                  25                                  30  
 Glu Ala Ser Phe Ser Gly Asp His Pro Gln Arg Gln Leu Lys Gly Glu  
                                   35                                  40                                  45  
 Ile Ala Ser His Pro Met Tyr Glu Gln Leu Leu Ser Ala His Val Ala  
                                   50                                  55                                  60  
 Cys Leu Arg Val Ala Thr Pro Ile Asp Gln Leu Pro Leu Ile Asp Ala  
 65                                  70                                  75                                  80  
 Gln Leu Ala Gln Ser His His Leu Leu Arg Ser Tyr Ala Ser Ser Val  
                                   85                                  90                                  95  
 Gln His Gly His Ser Ser Leu Ser Pro His Asp Arg Gln Glu Leu Asp  
                                   100                                  105                                  110  
 His Phe Leu Ala Gln Tyr Leu Val Leu Cys Ser Phe Lys Glu Gln  
                                   115                                  120                                  125  
 Leu Gln Gln His Val Arg Val His Ala Val Glu Ala Val Met Ala Cys  
                                   130                                  135                                  140  
 Arg



145

<210> 699  
 <211> 160  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 699  
 His Pro Asp Glu Lys Gln Arg Gln Gln Leu Ser Lys Gln Leu Gly Leu  
 1 5 10 15  
 Ala Pro Arg Gln Val Lys Phe Trp Phe Gln Asn Arg Arg Thr Gln Leu  
 20 25 30  
 Lys Ala Ile Gln Glu Arg His Glu Asn Ser Leu Leu Lys Thr Glu Met  
 35 40 45  
 Glu Lys Leu Arg Asp Glu Asn Lys Ala Met Arg Asp Thr Ile Gln Lys  
 50 55 60  
 Ser Cys Cys Pro Asn Cys Gly Ser Ala Thr Thr Ser Arg Asp Thr Ala  
 65 70 75 80  
 Leu Thr Thr Gln Glu Gln Gln Leu Arg Ile Glu Asn Ala Arg Leu Lys  
 85 90 95  
 Ala Glu Val Glu Lys Leu Arg Thr Ala Leu Gly Lys Tyr Thr Pro Gly  
 100 105 110  
 Thr Ala Ser Pro Ser Cys Ser Ala Gly Asn Asp Gln Glu Asn Arg Ser  
 115 120 125  
 Ser Leu Asp Phe Tyr Thr Gly Ile Phe Gly Leu Asp Lys Ser Lys Ile  
 130 135 140  
 Met Glu Leu Val Asn Gln Ala Met Glu Glu Leu Lys Lys Met Ala Thr  
 145 150 155 160

<210> 700  
 <211> 72  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 700  
 Pro Thr Thr Arg Thr Pro Gly Thr Lys Lys Lys Lys Ser Ser Asn Lys  
 1 5 10 15  
 Lys Ser Leu Gln Gly Glu Arg Glu Arg Ala Arg Thr Gln Glu Thr Leu  
 20 25 30  
 Asn Leu Ser Ser Pro Val Ser Ser Lys Arg Ala Arg Glu Lys Glu Arg  
 35 40 45  
 Glu Arg Glu Arg Glu Arg Glu Arg Glu Gly Val Glu Val Glu Glu Arg  
 50 55 60  
 Ala Arg Glu Glu Glu Gly Val Tyr  
 65 70

<210> 701  
 <211> 205  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 701  
 Leu Ile Arg Pro Cys Glu Gly Gly Gly Ala Ile Ile His Ile Val Asp  
 1 5 10 15  
 His Val Asp Leu Asp Ala Trp Ser Val Pro Glu Val Leu Arg Pro Leu  
 20 25 30  
 Tyr Glu Ser Ser Lys Ile Leu Ala Gln Lys Met Thr Val Ala Ala Leu  
 35 40 45  
 Arg His Ile Arg Gln Ile Ala Gln Glu Ser Ser Gly Glu Ile Gln Tyr  
 50 55 60  
 Gly Gly Ser Arg Gln Pro Ala Val Leu Arg Thr Phe Ser Gln Lys Leu

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65          70          75          80
Cys Arg Gly Phe Asn Asp Ala Val Asn Gly Phe Val Asp Asp Gly Trp
          85          90          95
Ser Val Leu Ser Ser Asp Gly Val Glu Asp Val Thr Ile Ala Val Asn
          100          105          110
Ser Ser Pro Asn Lys Phe Leu Gly Ser Gln Tyr Asn Ala Thr Ile Phe
          115          120          125
Pro Asn Phe Gly Arg Gly Val Leu Cys Ala Lys Ala Ser Met Leu Leu
          130          135          140
Gln Asn Val Pro Pro Ala Val Leu Val Arg Phe Leu Arg Glu His Arg
145          150          155          160
Ser Glu Trp Ala Asp His Gly Ile Asp Ala Tyr Ser Ala Ala Ser Leu
          165          170          175
Lys Thr Ser Ser Tyr Ala Ile Pro Cys Val Arg Pro Gly Gly Phe Pro
          180          185          190
Ser Ser His Val Ile Leu Pro Leu Ala His Thr Val Glu
          195          200          205

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<210> 702
<211> 126
<212> PRT
<213> Eucalyptus grandis

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<400> 702
Leu Phe Glu His Phe Leu His Pro Tyr Pro Lys Asp Ser Asp Lys Val
1          5          10          15
Met Leu Ala Lys Gln Thr Gly Leu Thr Arg Ser Gln Val Ser Asn Trp
          20          25          30
Phe Ile Asn Ala Arg Val Arg Leu Trp Lys Pro Met Val Glu Glu Met
          35          40          45
Tyr Thr Glu Glu Ile Lys Glu Gln Glu Gln Asn Gly Gly Gly Ala Glu
          50          55          60
Glu Lys Pro Ser Lys Ser Glu Arg Glu Asp Ser Ala Ser Lys Ser Ser
65          70          75          80
Gly Leu Gln Asp Lys Ala Pro Asn Ser Asn Glu Asn Ser Thr Lys Ser
          85          90          95
Phe Lys Pro Lys Glu Ile Thr Ser Arg Asn His Asp Thr Pro Ala Ile
          100          105          110
Ser Thr Asn Ser Ala Ser Ser Ile Gly Gly Asn Val Arg Ser
          115          120          125

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<210> 703
<211> 116
<212> PRT
<213> Eucalyptus grandis

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<400> 703
Asp Lys Leu Met Lys His Glu Tyr Gly Trp Val Phe Asn Thr Pro Val
1          5          10          15
Asp Val Lys Gly Leu Gly Leu His Asp Tyr Tyr Ser Ile Ile Lys His
          20          25          30
Pro Met Asp Leu Gly Ser Val Lys Thr Arg Leu Asn Arg Asn Trp Tyr
          35          40          45
Lys Ser Pro Lys Glu Phe Ala Glu Asp Val Arg Leu Thr Phe Arg Asn
          50          55          60
Ala Met Thr Tyr Asn Pro Glu Gly Gln Asp Val His Val Met Ala Glu
65          70          75          80
Ile Leu Tyr Lys Ile Phe Glu Asp Arg Trp Ala Ile Ile Glu Ser Asp
          85          90          95
Tyr Asn Arg Glu Met Arg Phe Ala Leu Asp Tyr Asp Met Gly Leu Pro
          100          105          110

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Thr Pro Thr Ser  
115

<210> 704  
<211> 116  
<212> PRT  
<213> Eucalyptus grandis

<400> 704  
Pro Ser Tyr Gly Asn Gly Tyr Ser Pro Pro Gln Tyr Gly Asn Gly Pro  
1 5 10 15  
Ala Tyr His Pro Met Pro Thr Tyr Tyr Pro Met Gly Tyr Arg Ile Cys  
20 25 30  
Ala Gly Cys Asn Thr Glu Ile Gly His Gly Arg Phe Leu Ser Cys Met  
35 40 45  
Asn Ala Val Trp His Pro Glu Cys Phe Cys Cys Arg Ala Cys Thr Leu  
50 55 60  
Pro Ile Ser Asp Tyr Glu Phe Ser Leu Ser Gly Asn Tyr Pro Tyr His  
65 70 75 80  
Lys Ser Cys Tyr Lys Glu His Tyr His Pro Lys Cys Asp Val Cys Ser  
85 90 95  
His Phe Ile Pro Thr Asn Leu Ala Gly Leu Ile Glu Tyr Arg Ala His  
100 105 110  
Pro Phe Trp Ser  
115

<210> 705  
<211> 96  
<212> PRT  
<213> Eucalyptus grandis

<400> 705  
Thr Trp Pro Glu Asp Ile Cys Ser Val Lys Ser Asp Met Phe Asp Ser  
1 5 10 15  
Glu Ser Pro His Tyr Thr Asp Ala Ala His Ser Ser Leu Leu Glu Pro  
20 25 30  
Gly Asp Ser Ser Tyr Ala Phe Glu Pro Asp His Ser Asp Leu Ser Gln  
35 40 45  
Asp Glu Glu Asp Asn Leu Ser Lys Ser Leu Leu Ser Thr Arg Asn Tyr  
50 55 60  
Pro Lys Leu Glu Asn Ser Asp Tyr Ala Ile Leu Pro Pro Asn Ser Cys  
65 70 75 80  
Asn Phe Gly Phe His Ala Glu Asp Pro Ala Phe Trp Pro Trp Ser Tyr  
85 90 95

<210> 706  
<211> 149  
<212> PRT  
<213> Eucalyptus grandis

<400> 706  
Glu Gly Lys Leu Gly His Ser Asn Ser Ser Asn Ser Leu Asp Asn Gly  
1 5 10 15  
Lys Tyr Val Arg Tyr Thr Pro Glu Gln Val Glu Ala Leu Glu Arg Leu  
20 25 30  
Tyr His Glu Cys Pro Lys Pro Ser Ser Leu Arg Arg Gln Gln Leu Ile  
35 40 45  
Arg Glu Cys Pro Ile Leu Ser Asn Ile Glu Pro Lys Gln Ile Lys Val  
50 55 60  
Trp Phe Gln Asn Arg Arg Cys Arg Glu Lys Gln Arg Lys Glu Ala Ser  
65 70 75 80

Arg Leu Gln Ala Val Asn Arg Lys Leu Thr Ala Met Asn Lys Leu Leu  
                     85                    90                    95  
 Met Glu Glu Asn Asp Arg Leu Gln Lys Gln Val Ser Gln Leu Val Tyr  
                     100                    105                    110  
 Glu Asn Gly Tyr Phe Arg Gln His Thr Gln Asn Thr Thr Leu Ala Thr  
                     115                    120                    125  
 Lys Asp Thr Ser Cys Glu Ser Val Val Thr Ser Gly Gln His Gln Leu  
                     130                    135                    140  
 Thr Ser Gln His Pro  
 145

<210> 707  
 <211> 134  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 707  
 Glu Glu Asn Met Gln His Leu Lys Asp Glu Ala Ala Asn Met Met Lys  
   1                    5                    10                    15  
 Lys Ile Glu Leu Leu Glu Asp Ser Arg Arg Lys Leu Leu Gly Glu Gly  
                     20                    25                    30  
 Leu Gly Ser Cys Ser Ile Glu Glu Leu Gln Gln Ile Glu Gln Gln Leu  
                     35                    40                    45  
 Glu Arg Ser Val Ile Ser Ile Arg Ala Arg Lys Thr Gln Val Phe Lys  
                     50                    55                    60  
 Glu Gln Ile Asp Lys Leu Lys Glu Lys Glu Lys Met Leu Thr Ala Glu  
   65                    70                    75                    80  
 Asn Ala Ile Leu Thr Glu Lys Cys Gly Ile Lys Pro Pro Gln Arg Ala  
                     85                    90                    95  
 Asn Glu Cys Arg Asp Ser Pro Leu Leu Arg Glu Ser Thr Pro Ser Ser  
                     100                    105                    110  
 Glu Val Glu Thr Gly Leu Phe Ile Gly Pro Pro Glu Thr Arg Ser Arg  
                     115                    120                    125  
 Arg Leu Pro Phe Gln Asn  
 130

<210> 708  
 <211> 124  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 708  
 Asp Lys Asp Pro Lys Arg Pro Val Arg Asp Pro Val Phe Ala Ala Val  
   1                    5                    10                    15  
 Pro Asp Lys Phe Val Ala Ser Met Met Lys Arg Cys Gly Leu Ile Leu  
                     20                    25                    30  
 Thr Lys Val Met Lys His Lys His Gly Trp Val Phe Asn Thr Pro Val  
                     35                    40                    45  
 Asp Ala Val Gly Leu Gly Leu His Asp Tyr His Gln Ile Ile Lys Asn  
                     50                    55                    60  
 Pro Met Asp Leu Gly Thr Val Lys Thr Asn Leu Glu Arg Asn Phe Tyr  
   65                    70                    75                    80  
 His Ser Pro Gln Glu Phe Ala Ala Asp Val Arg Leu Thr Phe Asn Asn  
                     85                    90                    95  
 Ala Leu Thr Tyr Asn Pro Lys Gly His Asp Val His His Met Ala Glu  
                     100                    105                    110  
 Thr Leu Leu Val Gln Phe Asp Gln Met Phe Asp Pro  
                     115                    120

<210> 709  
 <211> 126

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 709

Val	Ser	Leu	Ser	Arg	Val	Glu	Lys	His	Ala	Ser	Ser	Ala	Met	Asn	Lys
1				5					10					15	
Leu	His	Glu	Ala	Ala	Met	Lys	Gly	Asp	Leu	Ala	Ala	Leu	Gln	Asp	Leu
			20					25					30		
Leu	Leu	Gln	Asp	Pro	Gln	Ile	Leu	His	Lys	Thr	Thr	Ser	Ser	Ser	Ser
		35					40					45			
Asp	Gly	Thr	Pro	Leu	His	Val	Ser	Cys	Leu	Ser	Gly	His	Ala	Ser	Phe
	50					55					60				
Thr	Lys	His	Leu	Leu	Thr	His	Asn	Pro	Glu	Leu	Ala	Lys	Glu	Ala	Asp
65					70					75					80
Ser	Arg	Gly	Ser	Leu	Pro	Leu	His	Val	Ala	Cys	Ala	Lys	Gly	Asp	Val
				85					90					95	
Glu	Ile	Val	Arg	Ala	Leu	Val	Ala	Val	Asp	Pro	Ala	Gly	Cys	Leu	Arg
			100					105					110		
Tyr	Asp	Arg	Glu	Gly	Arg	Thr	Pro	Leu	His	Leu	Ala	Ala	Ile		
		115					120					125			

&lt;210&gt; 710

&lt;211&gt; 137

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 710

Asp	Asp	Leu	Asp	Asn	Glu	Arg	Ala	Ser	Ser	Arg	Gly	Gly	Gly	Ser	Asp
1				5					10					15	
Glu	Glu	Asp	Gly	Asp	Met	Ser	Arg	Lys	Lys	Leu	Arg	Leu	Ser	Lys	Asp
			20					25					30		
Gln	Ser	Ala	Val	Leu	Glu	Glu	Ser	Phe	Lys	Glu	His	Asn	Thr	Leu	Asn
		35					40					45			
Pro	Lys	Gln	Lys	Leu	Ala	Leu	Ala	Lys	Gln	Leu	Gly	Leu	Arg	Pro	Arg
	50					55					60				
Gln	Val	Glu	Val	Trp	Phe	Gln	Asn	Arg	Arg	Ala	Arg	Thr	Lys	Leu	Lys
65					70					75					80
Gln	Thr	Glu	Val	Asp	Cys	Glu	Tyr	Leu	Lys	Arg	Cys	Cys	Glu	Ser	Leu
			85					90					95		
Thr	Glu	Glu	Asn	Arg	Arg	Leu	Gln	Lys	Glu	Val	Gln	Glu	Leu	Arg	Ala
			100					105					110		
Leu	Lys	Leu	Ser	Pro	Gln	Phe	Tyr	Met	His	Leu	Phe	Pro	Ser	Thr	Thr
		115					120					125			
Leu	Thr	Met	Cys	Pro	Phe	Cys	Glu	Arg							
	130						135								

&lt;210&gt; 711

&lt;211&gt; 104

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 711

Ala	Asp	Tyr	Asp	Glu	Gly	Gly	Asp	Asp	Asn	Pro	Gly	Ser	Arg	His	Pro
1				5					10					15	
Val	Thr	Arg	Gln	Phe	Phe	Pro	Val	Glu	Glu	Glu	Glu	Glu	Leu	Glu	Glu
			20					25					30		
Asp	Gly	Glu	Arg	Ala	Gly	Met	Gly	Gly	Ala	Ala	Val	Pro	Pro	Gly	Phe
		35					40					45			
Pro	Arg	Ala	His	Trp	Val	Gly	Val	Arg	Phe	Arg	Gln	Ser	Asp	His	His
	50					55					60				
Pro	Ile	Gly	Ser	Gly	Lys	Gly	Ser	Pro	Ile	Leu	Glu	Gly	Ser	Gln	Pro

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<210> 712
<211> 138
<212> PRT
<213> Eucalyptus grandis
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<210> 713
<211> 128
<212> PRT
<213> Eucalyptus grandis
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<210> 714
<211> 93
<212> PRT
<213> Eucalyptus grandis
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205

1 5 10 15  
 Lys Lys Gly Lys Leu Pro Lys Glu Ala Arg Gln Lys Leu Leu Ser Trp  
 20 25 30  
 Trp Glu Leu His Tyr Lys Trp Pro Tyr Pro Ser Glu Thr Glu Lys Val  
 35 40 45  
 Ala Leu Ala Glu Ser Thr Gly Leu Asp Gln Lys Gln Ile Asn Asn Trp  
 50 55 60  
 Phe Ile Asn His Val Ile Glu Cys Trp Val Lys Ser Met Ala Thr Leu  
 65 70 75 80  
 Met Gln Glu Ile Phe Leu Met Thr Lys Val Ile Leu Arg  
 85 90

<210> 715  
 <211> 127  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 715  
 Thr Phe Ser Phe Gly Ile Leu Lys Ala Gly Glu Gly Gly Asp Gly Val  
 1 5 10 15  
 Ala Asp Asp Glu Leu Gly Val Thr Arg Gln Leu Phe Pro Val Arg Glu  
 20 25 30  
 Val Asp Ala Asp Met Glu Trp Cys Gly Glu Ser Ser Ser Leu Asp Lys  
 35 40 45  
 Arg Ser Asp Val Phe Leu Val Gly Ala Cys Lys Glu Lys Glu Gly Pro  
 50 55 60  
 Arg Leu Ala Met Pro Gln Gln Arg Arg Lys Ser Arg Arg Gly Pro Arg  
 65 70 75 80  
 Ser Arg Ser Ser Gln Tyr Arg Gly Val Thr Phe Tyr Arg Arg Thr Gly  
 85 90 95  
 Arg Trp Glu Ser His Ile Trp Asp Cys Gly Lys Gln Val Tyr Leu Gly  
 100 105 110  
 Gly Phe Asp Thr Ala His Ala Ala Arg Pro Met Ile Glu Leu  
 115 120 125

<210> 716  
 <211> 35  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 716  
 Ser Glu Asp Met Gln Phe Met Val Met Asp Gly Leu His Pro Gln Gly  
 1 5 10 15  
 Ala Ala Leu Tyr Met Asp Gly His Tyr Ile Gly Asp Gly Pro Tyr Arg  
 20 25 30  
 Leu Gly Pro  
 35

<210> 717  
 <211> 179  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 717  
 Ala Ala Phe Glu Gly Met Asp Ser Leu Pro Ser Pro Arg Lys Lys Lys  
 1 5 10 15  
 Asn Gln Leu Val Asn Arg Arg Arg Phe Ser Asp Glu Gln Ile Arg Ser  
 20 25 30  
 Leu Glu Ser Ile Phe Glu Ser Glu Ser Arg Leu Glu Pro Arg Lys Lys  
 35 40 45  
 Leu Gln Leu Ala Arg Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Ile

50 55 60  
 Trp Phe Gln Asn Lys Arg Ala Arg Trp Lys Ser Lys Gln Leu Glu Arg  
 65 70 75 80  
 Asp Phe Ala Ile Leu Arg Ala Asn Tyr Asn Ala Leu Tyr Ser Arg Phe  
 85 90 95  
 Glu Ser Leu Lys Lys Glu Lys Gln Ser Leu Val Thr Gln Ile Glu Lys  
 100 105 110  
 Leu Asn Gln Leu Val Glu Lys Pro Gln Gly Glu Gly Gln Ser Cys Gly  
 115 120 125  
 His Asp Leu Ala Thr Asn Ser Thr Asp Arg Glu Ser Asp Asn Gly Val  
 130 135 140  
 Pro Lys Tyr Glu Asp Ser Gln Pro Val Phe Pro Asp Lys Leu Thr Arg  
 145 150 155 160  
 Leu Met Gly Ile Pro Cys Glu Asp Asp Tyr Phe Gly Leu Lys Arg Ala  
 165 170 175  
 Glu Pro Pro

<210> 718  
 <211> 142  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 718  
 Asn Leu Thr Asp Lys Leu Leu His Lys Gly Asn Glu Lys Glu Ser Ser  
 1 5 10 15  
 Glu Ser Ser Ser Lys Ser Ser Gln Gly Leu Phe Gln Asn Pro Ile Ala  
 20 25 30  
 Asp Ser Val Ser Glu Asp Glu Val Ser Arg Val Pro Ile Pro Thr Trp  
 35 40 45  
 Pro Glu Asp Ile Cys Ser Val Lys Ser Asp Met Phe Asp Ser Glu Ser  
 50 55 60  
 Pro His Tyr Thr Asp Ala Ala His Ser Ser Leu Leu Glu Pro Gly Asp  
 65 70 75 80  
 Ser Ser Tyr Ala Phe Glu Pro Asp His Ser Asp Leu Ser Gln Asp Glu  
 85 90 95  
 Glu Asp Asn Leu Ser Lys Ser Leu Leu Ser Thr Arg Asn Tyr Pro Lys  
 100 105 110  
 Leu Glu Asn Ser Asp Tyr Ala Ile Leu Pro Pro Asn Ser Cys Asn Phe  
 115 120 125  
 Gly Phe His Ala Glu Asp Pro Ala Phe Trp Pro Trp Ser Tyr  
 130 135 140

<210> 719  
 <211> 207  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 719  
 Glu Lys Arg Thr Pro Lys Lys Arg Gly Arg Lys Pro Gly Leu Gly Arg  
 1 5 10 15  
 Asp Thr Pro Leu Asn His Val Glu Ala Glu Arg Gln Arg Arg Glu Lys  
 20 25 30  
 Leu Asn His Arg Phe Tyr Ala Leu Arg Ala Val Val Pro Asn Val Ser  
 35 40 45  
 Arg Met Asp Lys Ala Ser Leu Leu Ser Asp Ala Val Ser Tyr Ile Asn  
 50 55 60  
 Glu Leu Lys Ser Lys Ile Gly Asp Leu Glu Ser Gln Leu Gln Arg Glu  
 65 70 75 80  
 Ser Lys Arg Val Lys Gln Glu Val Thr Asp Ala Thr Asp Asn Leu Ser  
 85 90 95



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Thr Thr Thr Ser Val Asp His Ser Ser Pro Ser Gly Cys Gly Gly Ser
      100      105      110
Leu Leu Glu Val Glu Val Lys Ile Val Gly Cys Asp Ala Met Ile Arg
      115      120      125
Val Gln Ser Glu Asn Ala Asn Tyr Pro Ser Ala Arg Leu Met Ala Ala
      130      135      140
Met Arg Asp Leu Glu Leu His Ile His His Ala Ser Leu Ser Thr Val
145      150      155      160
Asn Asp Leu Met Leu Gln Asp Val Val Val Ser Val Pro Glu Gly Leu
      165      170      175
Lys Gly Glu Glu Asp Leu Arg Ala Ala Leu Leu Arg Ala Leu Glu Gln
      180      185      190
Arg Ser Glu Lys Leu Pro Gly Glu Arg Glu Arg Glu Tyr Val Leu
      195      200      205

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<210> 720
<211> 128
<212> PRT
<213> Eucalyptus grandis

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<400> 720
Glu Asp Asp Lys Leu Gly Arg Asn Arg Ala Ser Ala Asn Val Val Gln
 1      5      10      15
Ser Ser Ser Val Lys Gly Arg Pro Ser Gly Gly Thr Leu Val Val Cys
      20      25      30
Pro Thr Ser Val Leu Arg Gln Trp Gly Asp Glu Leu Lys Asn Lys Val
      35      40      45
Ser Glu Lys Ala Lys Leu Ser Val Cys Met Tyr His Gly Thr Thr Arg
50      55      60
Thr Lys Asp Pro Tyr Glu Leu Ala Asn Tyr Asp Val Val Leu Thr Thr
65      70      75      80
Tyr Ser Ile Val Ser Met Glu Val Pro Lys Pro Ala Gly Phe Lys Asp
      85      90      95
Glu Lys Asp Ser Leu Gln Asp Asp Asp Asp Ala Phe Phe Gly Arg Lys
      100      105      110
Arg Lys His Ser Ala Lys Ser Glu Lys Arg Arg Leu Lys Lys Glu Met
      115      120      125

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<210> 721
<211> 114
<212> PRT
<213> Eucalyptus grandis

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<400> 721
Phe Arg Leu Phe Ile Asn Trp Leu Leu Asp Phe Asn Ser Ala Asp Ser
 1      5      10      15
Ala Ile Asp Ser Ala His Phe Gln Ile Leu Thr Ala Phe Ala Asn Ala
      20      25      30
Phe His Ala Leu Gln Pro Leu Lys Val Pro Ala Phe Ser Phe Ala Trp
      35      40      45
Leu Glu Leu Val Ser His Arg Ser Phe Met Pro Lys Ile Leu Ser Gly
50      55      60
Asn Ser Gln Lys Gly Trp Pro Tyr Phe Gln Arg Leu Leu Val Asp Leu
65      70      75      80
Phe Gln Tyr Met Glu Pro Phe Leu Arg Asn Ala Glu Leu Gly Leu Pro
      85      90      95
Val His Phe Leu Tyr Lys Gly Thr Leu Arg Val Leu Leu Val Leu Leu
      100      105      110
His Asp

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<210> 722  
 <211> 183  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 722  
 Met Asn Arg Glu Arg Leu Met Lys Met Ala Gly Ser Val Arg Thr Gly  
 1 5 10 15  
 Gly Lys Gly Thr Met Arg Arg Lys Lys Lys Ala Val His Lys Thr Thr  
 20 25 30  
 Thr Thr Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Ile Gly Val  
 35 40 45  
 Asn Ala Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Asp Val  
 50 55 60  
 Val Ile Gln Phe Leu Asn Pro Lys Val Gln Ala Ser Ile Ala Ala Asn  
 65 70 75 80  
 Thr Trp Val Val Ser Gly Ser Pro Gln Thr Lys Lys Leu Gln Asp Ile  
 85 90 95  
 Leu Pro Gly Ile Ile Asn Gln Leu Gly Pro Asp Asn Leu Asp Asn Leu  
 100 105 110  
 Arg Lys Leu Ala Glu Gln Phe Gln Lys Gln Val Pro Gly Ala Ala Thr  
 115 120 125  
 Gly Ser Gly Ala Thr Gly Met Gln Asp Asp Asp Asp Asp Glu Val Pro  
 130 135 140  
 Glu Leu Val Pro Gly Glu Thr Phe Glu Ala Ala Ala Glu Glu Gly Gln  
 145 150 155 160  
 Ala Thr Gln Val Thr Glu Ala Thr Gln Val Thr Glu Ala Thr Lys Val  
 165 170 175  
 Thr Glu Ala Thr Pro Ala Ser  
 180

<210> 723  
 <211> 54  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 723  
 Gly Ser Cys Gln Lys Gly Asp Ser Cys Glu Tyr Ala His Gly Val Phe  
 1 5 10 15  
 Glu Ser Trp Leu His Pro Ala Gln Tyr Arg Thr Arg Leu Cys Lys Asp  
 20 25 30  
 Glu Thr Gly Cys Ala Arg Lys Val Cys Phe Phe Ala His Lys Pro Glu  
 35 40 45  
 Glu Leu Arg Pro Val Tyr  
 50

<210> 724  
 <211> 124  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 724  
 Met Ala Ser Ser Ser Gly Thr Ser Ser Gly Ser Thr Leu Ile Gln Asn  
 1 5 10 15  
 Ser Gly Ser Glu Glu Ser Leu Gln Ala Leu Met Asp Gln Arg Lys Arg  
 20 25 30  
 Lys Arg Met Ile Ser Asn Arg Glu Ser Ala Arg Arg Ser Arg Met Arg  
 35 40 45  
 Lys Gln Arg His Leu Asp Asp Leu Met Leu Val Val Ala Gln Leu Arg  
 50 55 60  
 Lys Asp Asn Gln Gln Leu Arg Asp Asn Val Asn Val Val Asn Gln His

65					70					75					80
Tyr	Met	Thr	Leu	Glu	Thr	Glu	Asn	Ser	Ile	Leu	Arg	Val	Gln	Met	Asn
				85					90					95	
Glu	Leu	Thr	Asn	Arg	Leu	Glu	Ser	Leu	Lys	Asp	Ile	Leu	Gly	Ile	Leu
			100					105					110		
Asp	Ala	Gly	Asp	Gly	Gly	Arg	Pro	Gly	Asn	Gly	Gly				
		115					120								

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<210> 725
<211> 120
<212> PRT
<213> Eucalyptus grandis
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	<400>	725														
Met	Thr	Asp	Gly	His	Leu	Phe	Asn	Asn	Ile	Ser	Leu	Gly	Gly	Arg	Gly	
1				5				10						15		
Gly	Ser	Asn	Pro	Gly	Gln	Ile	Lys	Ile	Phe	Ser	Gly	Gly	Ile	Ser	Trp	
			20					25					30			
Arg	Arg	Gln	Gly	Gly	Gly	Lys	Ala	Val	Glu	Val	Asp	Lys	Ser	Asp	Ile	
		35					40					45				
Val	Gly	Val	Thr	Trp	Met	Lys	Val	Pro	Arg	Thr	Asn	Gln	Leu	Gly	Val	
	50					55					60					
Arg	Thr	Lys	Asp	Gly	Leu	His	Tyr	Lys	Phe	Thr	Gly	Phe	Arg	Asp	Pro	
65					70					75					80	
Asp	Val	Ile	Ser	Leu	Thr	Asn	Phe	Phe	Gln	Asn	Thr	Cys	Gly	Leu	Thr	
				85					90					95		
Pro	Glu	Glu	Lys	Gln	Leu	Ser	Val	Ser	Gly	Arg	Asn	Trp	Gly	Glu	Val	
			100					105						110		
Asp	Leu	Ser	Gly	Asn	Met	Leu	Thr									
		115					120									

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<210> 726
<211> 58
<212> PRT
<213> Eucalyptus grandis
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	<400> 726														
Arg	Leu	Gly	Pro	Met	Gly	Pro	Lys	Thr	Leu	Cys	Asn	Ala	Cys	Gly	Ile
1				5					10					15	
Arg	Tyr	Lys	Thr	Gly	Arg	Leu	Phe	Pro	Glu	Tyr	Arg	Pro	Ser	Ala	Ser
			20					25					30		
Pro	Thr	Tyr	Val	Pro	Ser	Leu	Asn	Ile	Val	Ser	Asn	Glu	Ile	Pro	Ser
		35				40						45			
Ser	His	Leu	Trp	Leu	Ser	Leu	Leu	Gln	Lys						
	50					55									

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<210> 727
<211> 78
<212> PRT
<213> Eucalyptus grandis
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<400> 727															
Gly	Val	Ala	Ile	Asp	Val	Lys	Ile	Met	Gly	Trp	Asp	Glu	Val	Val	Arg
1				5					10					15	
Val	Glu	Ser	Gly	Arg	Lys	Asp	His	Pro	Ala	Ala	Arg	Leu	Met	Val	Ala
			20					25					30		
Leu	Gln	Glu	Leu	Asn	Leu	Glu	Leu	Gln	His	Ala	Ser	Val	Ser	Val	Val
		35					40					45			
Asn	Glu	Leu	Met	Ile	Gln	Gln	Ala	Thr	Val	Lys	Met	Gly	Ser	Gln	Leu
	50					55					60				
Tyr	Thr	Gln	Glu	Gln	Leu	Lys	Ala	Ala	Leu	Leu	Ala	Val	Ile		

65

70

75

<210> 728  
 <211> 123  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 728  
 Lys Pro Pro Met Lys Lys Gln Lys Ser Lys Pro Ala Ala Ala Ser Glu  
 1 5 10 15  
 Thr Ala Gly Pro Ala Arg Arg Cys Ser His Cys Gly Val Gln Lys Thr  
 20 25 30  
 Pro Gln Trp Arg Ala Gly Pro Asn Gly Ala Lys Thr Leu Cys Asn Ala  
 35 40 45  
 Cys Gly Val Arg Phe Lys Ser Gly Arg Leu Tyr Pro Glu Tyr Arg Pro  
 50 55 60  
 Ala Cys Ser Pro Thr Phe Ser Ser Glu Leu His Ser Asn His His Arg  
 65 70 75 80  
 Lys Val Leu Glu Met Arg Arg Lys Lys Glu Ser Met Thr Thr Thr Ala  
 85 90 95  
 Leu Gly Gln Pro Glu Pro Gly Arg Ala Arg Ala Gln Leu Leu Arg Ala  
 100 105 110  
 Arg Val Gly Ser Ser Trp Arg Pro Arg Glu Ile  
 115 120

<210> 729  
 <211> 213  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 729  
 Ala Ala Gly Leu Leu Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile  
 1 5 10 15  
 Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Asn Phe Thr Glu Glu Glu  
 20 25 30  
 Asp Glu Ile Ile Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser  
 35 40 45  
 Leu Ile Ala Gly Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn  
 50 55 60  
 Tyr Trp Asn Thr His Ile Arg Arg Lys Leu Leu Asn Arg Gly Ile Asp  
 65 70 75 80  
 Pro Ala Thr His Arg Leu Ile Asn Glu Pro Ala Gln Asp His His Asp  
 85 90 95  
 Glu Pro Thr Ile Ser Phe Ala Ala Asn Ser Lys Glu Ile Lys Glu Met  
 100 105 110  
 Lys Asn Asn Ala Glu Leu Asn Phe Met Cys Asn Leu Glu Glu Ser Ala  
 115 120 125  
 Asp Val Ala Ser Ser Ala Arg Glu Arg Cys Pro Asp Leu Asn Leu Glu  
 130 135 140  
 Leu Gly Ile Ser Pro Pro Ser His Gln Leu His Gln Pro Glu Pro Leu  
 145 150 155 160  
 Leu Arg Phe Thr Gly Arg Lys Ser Asp Leu Cys Leu Glu Cys Asn Leu  
 165 170 175  
 Gly Leu Lys Asn Ser Gln Asn Cys Arg Cys Ser Val Gly Val Ile Glu  
 180 185 190  
 Ser Glu Thr Ser Val Gly Tyr Asp Phe Leu Gly Leu Lys Ala Ser Val  
 195 200 205  
 Leu Asp Tyr Arg Ser  
 210

<210> 730

<211> 61  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 730  
 Met Ser Val Leu Ser Lys Ser Asp Ser Val Glu Ile Arg Glu Val Trp  
 1 5 10 15  
 Glu Tyr Asn Leu Glu Asp Glu Phe Ser Phe Ile Arg Glu Ile Val Asp  
 20 25 30  
 Asp Tyr Pro Tyr Ile Ala Met Asp Thr Glu Phe Pro Gly Met Val Leu  
 35 40 45  
 Arg Pro Val Gly Asn Phe Lys Ser Ser Ser Glu Ser His  
 50 55 60

<210> 731  
 <211> 94  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 731  
 Met Arg Arg Lys Lys Lys Ala Val His Lys Thr Thr Thr Thr Asp Asp  
 1 5 10 15  
 Lys Arg Leu Gln Ser Thr Leu Lys Arg Ile Gly Val Asn Ala Ile Pro  
 20 25 30  
 Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Asp Val Val Ile Gln Phe  
 35 40 45  
 Leu Asn Pro Lys Val Gln Ala Ser Ile Ala Ala Asn Thr Trp Val Val  
 50 55 60  
 Ser Gly Ser Pro Gln Thr Lys Lys Leu Gln Asp Ile Leu Pro Gly Ile  
 65 70 75 80  
 Ile Asn Gln Leu Gly Pro Asp Asn Leu Asp Asn Leu Gly Ser  
 85 90

<210> 732  
 <211> 103  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 732  
 Tyr Trp Glu Thr Leu Met Phe Phe Gln Ser Glu Glu Leu Leu His Asn  
 1 5 10 15  
 Ser Cys Val Ser Glu Val Ile Ser Arg Phe Asn Gly Pro Ser Ser Pro  
 20 25 30  
 Asp Ala Ala Ala Leu Pro Val Ala Ser Lys Ser Ile Asp Leu Glu Arg  
 35 40 45  
 Asn Arg Arg Lys Lys Leu Asn Glu Arg Leu Phe Ala Leu Arg Ala Leu  
 50 55 60  
 Val Pro Lys Ile Ser Lys Met Asp Lys Ala Ser Ile Val Lys Asp Ala  
 65 70 75 80  
 Ile Asp Tyr Ile Gln Asp Leu Arg Glu Gln Glu Gly Arg Ser Glu Pro  
 85 90 95  
 Arg Ser Gln Ser Ser Asn Leu  
 100

<210> 733  
 <211> 78  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 733  
 Gly Val Ala Ile Asp Val Lys Ile Met Gly Trp Asp Ala Val Val Arg

```

      1           5           10           15
Val Glu Ser Gly Arg Lys Asp His Pro Ala Ala Arg Leu Met Val Ala
      20           25           30
Leu Gln Glu Leu Asn Leu Glu Leu Gln His Ala Ser Val Ser Val Val
      35           40           45
Asn Glu Leu Met Ile Gln Gln Ala Thr Val Lys Met Gly Ser Gln Leu
      50           55           60
Tyr Thr Gln Glu Gln Leu Lys Ala Ala Leu Leu Ala Val Ile
      65           70           75

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<210> 734
<211> 122
<212> PRT
<213> Eucalyptus grandis

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```

      <400> 734
Gly Ile Tyr Ser Cys Leu Asn Leu Asp Ala Ser Asn Gly Gly Ser Ser
      1           5           10           15
Ala Ile Asp Pro Ser Ile Ser Ser Ala Ile Leu Asp Asp Phe Cys Thr
      20           25           30
Ile Lys Asp Gly Pro Phe Pro Asn Leu Ser Asp Cys Leu Val Gly Asn
      35           40           45
Phe Ser Ser Ser Gln Asp Val Gln Ser Gln Ile Thr Ser Ala Ser Leu
      50           55           60
Ala Asp Ser Gln Ala Phe Ser Arg Gln Asp Phe Pro Asp Asn Ser Gly
      65           70           75           80
Gly Thr Ser Ser Ser Asn Val Asp Phe Asp Glu Ser Ser Ile Leu Lys
      85           90           95
Asn Ser Thr Trp Gln Gln Gln Val Ala Pro Pro Met Arg Thr Tyr Thr
      100           105           110
Lys Val Gln Lys Ala Gly Ser Val Gly Arg
      115           120

```

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<210> 735
<211> 133
<212> PRT
<213> Eucalyptus grandis

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```

      <400> 735
Met Gly Ser Ser Ala Ser Ser Gln Arg Pro Asp Asn Leu Gln Asp Lys
      1           5           10           15
Val Gly Pro Val Ser Val Ser Asp Glu Glu Trp Lys Lys Arg Leu Thr
      20           25           30
Pro Glu Gln Tyr Tyr Val Ala Arg Gln Lys Gly Thr Glu Arg Ala Phe
      35           40           45
Thr Gly Glu Tyr Trp Asn Thr Lys Thr Pro Gly Thr Tyr His Cys Val
      50           55           60
Cys Cys Asp Thr Pro Leu Phe Glu Ser Asn Thr Lys Phe Asp Ser Gly
      65           70           75           80
Thr Gly Trp Pro Ser Tyr Tyr Gln Pro Ile Gly Asn Asn Val Lys Ser
      85           90           95
Lys Leu Asp Leu Ser Ile Ile Phe Met Pro Arg Gln Glu Val Leu Cys
      100           105           110
Ala Ala Cys Asp Ala His Leu Gly His Ile Phe Asp Asp Gly Pro Pro
      115           120           125
Pro Thr Gly Lys Arg
      130

```

```

<210> 736
<211> 163
<212> PRT

```

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 736

```

Met Val Asp Lys Cys Gly Glu Gly Leu Leu Val Ala Val Glu Ala Gln
 1          5          10          15
Lys Ala Val Pro Ala Pro Phe Leu Thr Lys Thr Tyr Gln Leu Val Asp
          20          25          30
Asp Pro Ser Thr Asp His Ile Val Ser Trp Gly Asp Asp Asp Ser Thr
          35          40          45
Phe Val Val Trp Arg Pro Pro Glu Phe Ala Arg Asp Leu Leu Pro Asn
          50          55          60
Tyr Phe Lys His Asn Asn Phe Ser Ser Phe Val Arg Gln Leu Asn Thr
65          70          75          80
Tyr Gly Phe Arg Lys Ile Val Pro Asp Arg Trp Glu Phe Ala Asn Glu
          85          90          95
Phe Phe Arg Lys Gly Glu Lys His Leu Leu Cys Glu Ile His Arg Arg
          100          105          110
Lys Thr Ala Gln Pro Gln Leu Thr His His His Pro His Ser Ala Ser
          115          120          125
Pro Leu Ser Gly Pro Thr Pro Ala Phe Phe Pro Phe Pro Ser Arg Leu
          130          135          140
Ser Ile Ser Pro Ser Asp Ser Asp Asp Gln His Ser Ser His Trp Cys
145          150          155          160
Asp Ser Pro

```

&lt;210&gt; 737

&lt;211&gt; 172

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 737

```

Met Ala Leu Glu Ala Leu Ser Ser Pro Thr Ala Pro Ser Ala Pro Phe
 1          5          10          15
Gln Phe Met Lys Asp Ser Ser Pro Ala Ala Ala Ala Ala Ala Ser
          20          25          30
Ser Ser Ser Ser Ala Tyr Asp Leu Pro Leu Ala Glu Pro Trp Ala Lys
          35          40          45
Arg Lys Arg Ser Lys Arg Pro His Asn Pro Pro Ser Glu Asp Glu Tyr
          50          55          60
Leu Ala Leu Cys Leu Ile Met Leu Ala Arg Gly Gly Ala Gly Arg Thr
65          70          75          80
Leu Pro Pro Pro Pro Pro Pro Ala Val Ser Ser Glu Ala Ala Lys Val
          85          90          95
Ala Tyr Arg Cys Pro Val Cys Asp Lys Gly Phe Pro Ser Tyr Gln Ala
          100          105          110
Leu Gly Gly His Lys Ala Ser His Arg Lys His Ala Ser Ser Ala Ala
          115          120          125
Ala Ala Ala Gly Gly Asp Asp Gln Pro Thr Thr Ser Ser Thr Ser Ala
          130          135          140
Ala Thr Thr Ser Ser Gly Val Ser Gly Lys Val His Glu Cys Ser Ile
145          150          155          160
Cys His Lys Ser Phe Pro Thr Gly Gln Ala Leu Gly
          165          170

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&lt;210&gt; 738

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 738

```

Ile Ser Ser Ser Arg Trp Pro Arg Gln Glu Thr Leu Thr Leu Leu Glu
 1          5          10          15
Ile Arg Ser Arg Leu Asp Pro Lys Phe Lys Glu Ala Asn Gln Lys Gly
          20          25          30
Pro Leu Trp Asp Glu Val Ser Arg Ile Met Ser Glu Glu His Gly Tyr
          35          40          45
Asn Arg Ser Gly Lys Lys Cys Arg Glu Lys Phe Glu Asn Leu Tyr Lys
          50          55          60
Tyr Tyr Lys Thr Thr Lys Glu Gly Lys Ala Gly Arg Gln Asp
65          70          75

```

<210> 739  
 <211> 135  
 <212> PRT  
 <213> Eucalyptus grandis

```

          <400> 739
Met Gly Pro Gln Met Asn Phe Arg Asn Leu Ala Asp Val Pro Ala Ala
 1          5          10          15
Glu Arg Ser Thr Gly Gly Gln Pro Gly Ile Pro Leu Leu Ser Arg Gln
          20          25          30
Ser Ser Val Tyr Ser Leu Thr Phe Asn Glu Phe Gln Asn Thr Trp Ser
          35          40          45
Gly Leu Ser Lys Asp Ile Gly Ser Ile Asn Met Asp Glu Phe Leu Lys
          50          55          60
Asn Ile Trp Thr Ala Glu Glu Ser Gln Leu Gln Leu Gln Asp Met Ala
65          70          75          80
Pro Ser Gly Asn Gly Gly Glu Gly Gly Gly Gln Val Gly Asn Leu Leu
          85          90          95
Arg Gln Gly Ser Leu Thr Leu Ser Arg Thr Ile Ser Gln Lys Thr Val
          100          105          110
Asp Glu Val Trp Arg Glu Leu Phe Lys Glu Thr Glu Asp Val Lys Glu
          115          120          125
Gly Ser Arg Glu Gly Gly Asp
130          135

```

<210> 740  
 <211> 49  
 <212> PRT  
 <213> Eucalyptus grandis

```

          <400> 740
Asp Phe Glu Arg Asn Arg Ala Glu Gly Val Asp Ser Ala Arg Phe Ala
 1          5          10          15
Glu Leu Met Ile Ser Ser Gly Leu Leu Cys Asn Asp Ala Val Ile Trp
          20          25          30
Val Thr Phe His Ser Ala Tyr Asp Phe Gly Tyr Leu Val Lys Ile Leu
          35          40          45
Thr

```

<210> 741  
 <211> 101  
 <212> PRT  
 <213> Eucalyptus grandis

```

          <400> 741
Met Asn Phe Ser Asp Lys Glu Val Gln Leu Ala Ser Asp His Pro Lys
 1          5          10          15
Lys Pro Ala Gly Arg Lys Lys Phe Arg Glu Thr Arg His Pro Val Tyr
          20          25          30

```



Arg Gly Val Arg Leu Arg Asp Ser Gly Lys Trp Val Cys Glu Val Arg  
                   35                  40                  45  
 Glu Pro Lys Lys Lys Ser Arg Ile Trp Leu Gly Thr Phe Pro Thr Val  
           50                  55                  60  
 Glu Met Ala Ala Arg Ala His Asp Val Ala Ala Leu Ala Leu Arg Gly  
 65                  70                  75                  80  
 Gln Ser Ala Cys Leu Asn Phe Ala Asp Ser Ala Trp Arg Leu Pro Lys  
                   85                  90                  95  
 Pro Ala Ser Thr Asp  
                   100

&lt;210&gt; 742

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 742

Gly Met Asp Ser Arg Thr Ser Ser Arg Ile Ser Gly Val Thr Leu Gln  
   1                  5                  10                  15  
 Glu Val Pro Pro Thr Ser Ser Gln Val Pro Glu Ile Pro Pro Ala Leu  
                   20                  25                  30  
 Gly Ala Ser Ala Asn Asp Pro Ser Ser Ala Val Ser Glu Leu Lys Ala  
                   35                  40                  45  
 Pro Ser Gln Gly Thr Ala Lys Val Thr Thr Asn Gln Phe Pro Asp Met  
                   50                  55                  60  
 Gly Met Leu Ala Gly Ala Gln Glu Ser Glu Ala Val Ser Val Asn Gln  
 65                  70                  75                  80  
 Ala Asp Thr Val Met Thr Gly Ile Ser Gln Thr Gln Asp Met Val Leu  
                   85                  90                  95  
 Glu Asp Ile Ala Asn Ile Ser Arg Asp Asp Tyr Met Gly Ala Asp Leu  
                   100                  105                  110  
 His

&lt;210&gt; 743

&lt;211&gt; 200

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 743

Lys Ala Tyr Ala Arg Arg Gln His Ala Trp Leu Thr Gly Ala Asn Glu  
   1                  5                  10                  15  
 Val Asp Ser Lys Thr Phe Ser Arg Ala Ile Leu Ala Lys Ser Ala Arg  
                   20                  25                  30  
 Ile Gln Thr Val Val Cys Ile Pro Leu Leu Asp Gly Val Val Glu Phe  
                   35                  40                  45  
 Gly Thr Thr Glu Arg Val Gln Glu Asp Ile Ser Leu Val Asn His Val  
                   50                  55                  60  
 Lys Thr Phe Phe Val Asp His His Pro Pro His Pro Pro Lys Pro Ala  
 65                  70                  75                  80  
 Leu Ser Glu His Ser Thr Ser Asn Pro Ala Ala Thr Ser Ser Gly His  
                   85                  90                  95  
 His Arg Phe His Ser Pro Pro Val Pro Ser Tyr Ala Pro Ala Asp Pro  
                   100                  105                  110  
 Pro Ala Ala Ala Asn Gln Gly Asp Glu Glu Glu Glu Asp Asp Asp  
                   115                  120                  125  
 Asp Glu Glu Glu Gly Glu Ser Asp Ser Glu Ala Glu Thr Gly Arg Gln  
                   130                  135                  140  
 Gly Ala Ala Ala Ala Ala Gln Asn Pro His Gly Ala Gly Pro Ala Asn  
 145                  150                  155                  160  
 Asn Ala Glu Pro Ser Glu Phe Glu Met Ser Glu Asp Ile Arg Leu Gly

				165					170					175			
Ser	Pro	Asp	Asp	Gly	Ser	Asn	Asn	Leu	Asp	Ser	Asp	Phe	Pro	Met	Leu		
			180					185					190				
Thr	Ile	Asn	Ser	Thr	Ala	Ala	Asp										
		195					200										

<210> 744  
 <211> 327  
 <212> PRT  
 <213> Eucalyptus grandis

Asp	Gly	Ser	Cys	Arg	Glu	Pro	Lys	Asp	Gly	Glu	Glu	Ser	Glu	Ala	Thr		
1			5					10					15				
Arg	Ile	Leu	Asn	Leu	Arg	Leu	Glu	Asp	Glu	Gly	Gln	Gln	Arg	Met	Arg		
		20					25					30					
Lys	Arg	Val	Leu	Asp	Lys	Leu	His	Thr	Val	Phe	Gly	Gly	Ser	Asp	Glu		
		35				40					45						
Asp	Asn	Tyr	Ala	Leu	Gly	Leu	Asp	Arg	Val	Thr	Asp	Met	Glu	Met	Phe		
	50				55					60							
Phe	Leu	Ala	Ser	Met	Tyr	Phe	Leu	Phe	Pro	Ser	Gly	Glu	Gly	Gly	Pro		
65				70					75					80			
Gly	Lys	Cys	Phe	Ala	Ser	Glu	Lys	His	Val	Trp	Leu	Thr	Asp	Ala	Leu		
			85					90					95				
Lys	Ser	Ser	Ser	Asp	Tyr	Cys	Val	Arg	Ser	Phe	Leu	Ala	Lys	Ser	Ala		
			100				105					110					
Gly	Ile	Arg	Thr	Ile	Val	Leu	Val	Pro	Thr	Asp	Val	Gly	Val	Val	Glu		
	115					120					125						
Leu	Gly	Ser	Val	Arg	Ser	Val	Pro	Glu	Ser	Ser	Glu	Leu	Val	Gln	Thr		
	130					135					140						
Ile	Arg	Leu	Ser	Phe	Ser	Thr	Asn	Ser	Phe	Met	Ser	Val	Lys	Pro	Ile		
145				150					155					160			
Ala	Ala	Leu	Pro	Met	Thr	Asn	Glu	Lys	Lys	Asp	Glu	Asn	Ala	Pro	Phe		
			165					170					175				
Ser	Asn	Leu	Ala	Leu	Ala	Gly	Lys	Gly	Glu	Ala	Ile	Ser	Lys	Ile	Phe		
		180				185						190					
Gly	Lys	Glu	Leu	Thr	Thr	Val	Asn	Ser	Pro	Gly	His	Tyr	Arg	Glu	Lys		
	195					200					205						
Leu	Ala	Val	Arg	Lys	Met	Asp	Ser	Arg	Gln	Ser	Trp	Glu	Pro	His	His		
	210				215					220							
Asn	Gly	Ser	Lys	Leu	Pro	Phe	Ser	Thr	Pro	Arg	Asn	Gly	Thr	Gln	Asp		
225				230					235					240			
Thr	Ser	Trp	Ala	His	His	Ala	His	Gly	Val	Lys	Gln	Leu	Ser	Pro	Val		
			245					250					255				
Glu	Phe	Tyr	Gly	Ser	Gln	Thr	Ser	Ala	Ser	Lys	Leu	Glu	Glu	Arg	Met		
		260				265						270					
Asn	Ser	Gly	Arg	Asn	Asp	Phe	Gly	Leu	Asn	Arg	Tyr	Pro	Thr	Pro	Lys		
	275					280					285						
Gln	Val	Gln	Met	Gln	Ile	Asp	Phe	Thr	Gly	Ala	Thr	Ser	Arg	Pro	Ser		
	290				295					300							
Val	Ile	Thr	Arg	Pro	Phe	Thr	Ala	Asp	Ser	Glu	His	Ser	Asp	Val	Glu		
305				310					315					320			
Ala	Ser	Cys	Lys	Glu	Glu	Gln											
			325														

<210> 745  
 <211> 361  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 745

Met Met Met Met Thr Met Ala Ala Gly Gly Gly Asp His His Ala Arg  
 1 5 10 15  
 Ser Thr Pro Thr Val Gln Ile Pro Pro Val Trp Asp Pro Leu Asp Asp  
 20 25 30  
 Pro Ala Thr Gly Gly Cys Gly Gly Pro Tyr Ser Pro Tyr Ser Pro Tyr  
 35 40 45  
 Ser Pro Tyr Ser Gly Gly Gly Asn Ala Gly Gly Ala Ala Gly Gly Gly  
 50 55 60  
 Glu Cys Cys Asn Asp Leu Thr Ala Leu Arg Arg Phe Leu Pro Ser Asn  
 65 70 75 80  
 His His Gln Asp Glu Asp Glu Glu Asp Gly Arg Ala Pro Gly Glu  
 85 90 95  
 Asp Gly Val Leu Gly Cys Asp Glu Phe Arg Met Tyr Glu Phe Lys Val  
 100 105 110  
 Arg Lys Cys Ala Arg Gly Arg Ser His Asp Trp Thr Glu Cys Pro Tyr  
 115 120 125  
 Ala His Pro Gly Glu Lys Ala Arg Arg Arg Asp Pro Arg Arg Phe Phe  
 130 135 140  
 Tyr Ser Gly Thr Ala Cys Pro Asp Phe Arg Lys Gly Ala Cys Lys Lys  
 145 150 155 160  
 Gly Asp Thr Cys Glu Phe Ala His Gly Val Phe Glu Cys Trp Leu His  
 165 170 175  
 Pro Glu Arg Tyr Arg Thr Gln Ala Cys Lys Asp Gly Gln Ser Cys Arg  
 180 185 190  
 Arg Arg Val Cys Phe Phe Ala His Ser Pro Asp Gln Leu Arg Val Leu  
 195 200 205  
 Pro Ala His Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln His Ser  
 210 215 220  
 Pro Lys Ser Ala Thr Asp Ser Glu Phe Gly Ser Pro Val Arg Pro Ser  
 225 230 235 240  
 Ala Ala Ala Ala Ala Ala Phe Asp Ser Tyr Phe Thr Lys Pro Trp Ser  
 245 250 255  
 Ala Ser Phe Ile Ser Ser Pro Thr Ser Ile Leu Thr Thr Ser Ser Pro  
 260 265 270  
 Pro Ile Ser Pro Pro Thr Asn Ser Pro Pro Met Ser Pro Asn Gln Arg  
 275 280 285  
 Gly Gly Cys Cys Gly Ser Pro Gly Ser Val Ser Glu Leu Val Ala Cys  
 290 295 300  
 Met Arg Asn Met Gln Ile Ala Lys Met Lys Met Ser Pro Arg Gly Gln  
 305 310 315 320  
 Met Gly Gly Ser Leu Phe Gly Ser Pro Leu Arg Pro Gly Cys His Leu  
 325 330 335  
 Ala Ala Pro Val Thr Pro Arg Ala Glu Ser Ser Pro Arg Tyr Gly Gln  
 340 345 350  
 Leu Gly Gly Gly Gly Gly Gly Gly Leu  
 355 360

&lt;210&gt; 746

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 746

Leu Ile Arg Trp Arg Lys His Arg Arg Val Arg Trp Ala Val Gly Ala  
 1 5 10 15  
 Thr Arg Ala Ala Ala Ser Arg Ala Arg Ser Ser Gly Gly Val Arg Glu  
 20 25 30  
 Gln Asp Arg Tyr Leu Pro Ile Ala Asn Ile Ser Arg Ile Met Lys Lys  
 35 40 45  
 Ala Leu Pro Ala Asn Gly Lys Ile Ala Lys Asp Ala Lys Asp Thr Val  
 50 55 60

Gln Glu Cys Val Ser Glu Phe Ile Ser Phe Ile Thr Ser Glu  
65 70 75

<210> 747  
<211> 278  
<212> PRT  
<213> Eucalyptus grandis

<400> 747  
Met Ala Thr Pro Asp Glu Arg Pro Ser Ser Ser Ser Ser Ala Ala Ser  
1 5 10 15  
Ala Val Ala Ile Arg Gln Val Trp Ala Trp Asn Leu Asp Ala Glu Phe  
20 25 30  
Gly Leu Ile Arg Asp Leu Ile Asp Arg Tyr Pro Phe Val Ser Met Asp  
35 40 45  
Thr Glu Phe Pro Gly Leu Val Phe Arg Arg Pro Ala Gly Ala Gly Ala  
50 55 60  
Gly Ala Arg Pro Ser Pro Ser Asp His Tyr Arg Leu Leu Lys Ser Asn  
65 70 75 80  
Val Asp Ala Leu Ser Leu Ile Gln Val Gly Leu Thr Leu Ser Asp Ala  
85 90 95  
Arg Gly Gly Leu Pro Gly Phe Ile Trp Glu Phe Asn Phe Arg Glu Phe  
100 105 110  
Asp Ala Ala Arg Asp Pro His Ala Pro Asp Ser Ile Glu Leu Leu Arg  
115 120 125  
Arg Gln Gly Val Asp Phe Asp Arg Asn Arg Ala Glu Gly Ile Asp Ser  
130 135 140  
Ala Arg Phe Ala Glu Leu Val Met Ser Ser Gly Leu Val Cys Asn Asp  
145 150 155 160  
Ala Val Ser Trp Val Thr Phe His Ser Ala Tyr Asp Phe Gly Tyr Leu  
165 170 175  
Val Lys Ala Leu Thr Arg Arg Glu Leu Pro Gly Asp Leu Pro Glu Phe  
180 185 190  
Leu Ala Val Val Arg Val Phe Phe Gly Asp Arg Val Tyr Asp Val Lys  
195 200 205  
His Leu Met Arg Phe Cys His Ser Leu His Gly Gly Leu Asp Arg Val  
210 215 220  
Ala Ala Ala Leu Glu Leu Asp Arg Ala Val Gly Lys Cys His Gln Ala  
225 230 235 240  
Gly Ser Asp Ser Leu Leu Thr Trp Gln Ala Phe Arg Lys Ile Arg Asp  
245 250 255  
Val Tyr Phe Ala Asn Asp Asp Gly Pro Glu Lys His Ala Gly Val Leu  
260 265 270  
Tyr Gly Leu Glu Val Tyr  
275

<210> 748  
<211> 31  
<212> PRT  
<213> Eucalyptus grandis

<400> 748  
Met Ala Thr Gly Val Glu Gly Asn Glu Gly Val Pro Ala Asn Leu Arg  
1 5 10 15  
Lys Gln Leu Ala Val Ala Val Arg Ser Ile Gln Trp Ser Tyr Ala  
20 25 30

<210> 749  
<211> 229  
<212> PRT  
<213> Eucalyptus grandis

```

      <400> 749
Met Asn His Phe Phe Ser Ser Tyr Ser Asp Pro Ser Ser Cys Ser Leu
 1          5          10          15
Asp Phe Ala Glu Ala Ser Ser Ser Ser Ser Pro Leu Ser Asp Gly Arg
      20          25          30
Ser Ala Met Val Pro Gly Asn Phe Ser Asp Glu Glu Val Leu Leu Ala
      35          40          45
Ser His Gln Pro Lys Lys Arg Ala Gly Arg Lys Lys Phe Gln Glu Thr
      50          55          60
Arg His Pro Val Tyr Arg Gly Val Arg Arg Arg Ser Ser Gly Lys Trp
      65          70          75          80
Val Cys Glu Val Arg Glu Pro Asn Lys Lys Ser Arg Ile Trp Leu Gly
      85          90          95
Thr Phe Pro Thr Ala Glu Met Ala Ala Arg Ala His Asp Val Ala Ala
      100          105          110
Leu Ala Leu Arg Gly Arg Ser Ala Cys Leu Asn Phe Ala Asp Ser Ala
      115          120          125
Trp Arg Leu Pro Ala Pro Ala Ser Ala Asp Ala Lys Asp Ile Gln Gln
      130          135          140
Ala Ala Ala Gln Ala Ala Glu Ala Phe Arg Pro Ala Glu Ser Glu Ala
      145          150          155          160
Glu Asp Val Met Ser Gly Tyr Glu Lys Lys Ser Pro Ser Glu Glu Gly
      165          170          175
Met Leu Tyr Asp Asp Glu Asp Val Phe Gly Met Pro Gly Leu Leu Thr
      180          185          190
Asn Met Ala Glu Gly Met Leu Leu Pro Pro Pro Gln Cys Gly Gly Asp
      195          200          205
Gly Tyr Gly Gly Glu Asp Asp Gly Asn Leu Asp Ala Tyr Val Ser Leu
      210          215          220
Trp Asn Tyr Ser Met
      225

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      <210> 750
      <211> 210
      <212> PRT
      <213> Eucalyptus grandis

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      <400> 750
Met Pro Ile Arg Ile Gln Asn Leu Pro Lys Lys Asn Phe Asp Gln Gly
 1          5          10          15
Ser Ser Leu Ser Met Pro His Val Gly Val Thr Tyr Pro Pro Trp Trp
      20          25          30
Ser Leu Asn Glu Gln Gln Leu Pro Gln Ser Leu Pro Lys Asn Ser Gly
      35          40          45
Leu Lys Ala Glu Ser Pro Pro Met Leu His His Gln Ala Lys His Leu
      50          55          60
Gly Leu Gln Leu Gln Glu Gln Glu Ser Ser Ser Thr Gln Ser Ala Gly
      65          70          75          80
Asn Ser Cys His Glu Val Ser Val Val Gly Gly Ala Asn Ser Gln Asp
      85          90          95
Gln Ser Ile Ser Ser Glu Ser Gly Gln Asp Glu Ser Cys Gly Arg Ser
      100          105          110
Phe Glu Gly Gln Thr Lys Pro Ile Phe Met Phe Asn Asn Pro Glu Ile
      115          120          125
Val Phe Asn Ser Ser Leu Ala Asp Gln Asn Gln Pro Leu Ile Arg Val
      130          135          140
Pro Tyr Pro Pro Val Asp Pro Tyr Tyr Gly Gly Leu Leu Thr Ala Tyr
      145          150          155          160
Arg Pro Gln Ala Ile Ile Gln Ser Gln Val Gly Ser Gln Met Phe Gly
      165          170          175

```

Met Ala Pro Gly Arg Val Pro Leu Pro Leu Asn Leu Ala Asp His Gly  
                     180                    185                    190  
 Pro Ile Tyr Val Asn Ala Lys Gln Tyr Ser Arg Asn Ser Ser Glu Glu  
                     195                    200                    205  
 Ala Val  
                     210

<210> 751  
 <211> 93  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 751  
 Gly Tyr Gly Phe Val Arg Phe Gly Asp Glu Thr Glu Gln Leu Arg Ala  
   1                    5                    10                    15  
 Met Thr Glu Met Asn Gly Met Tyr Cys Ser Ser Arg Pro Met Arg Ile  
                     20                    25                    30  
 Gly Pro Ala Ala Asn Lys Lys Pro Ile Ala Thr Gln Gln Tyr Gln Ser  
                     35                    40                    45  
 Ala Ser Tyr Gln Asn Ser Gln Gly Asn Gln Gly Glu Asn Asp Pro Asn  
   50                    55                    60  
 Asn Thr Thr Ile Phe Val Gly Gly Leu Asp Pro Ser Val Ser Asp Asp  
   65                    70                    75                    80  
 Leu Leu Arg Gln Val Phe Ser Gln Tyr Gly Glu Leu His  
                     85                    90

<210> 752  
 <211> 97  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 752  
 Gly Tyr Arg Arg Ser Ala Lys Lys Cys Lys Glu Lys Phe Glu Asn Val  
   1                    5                    10                    15  
 His Lys Tyr Tyr Lys Arg Thr Lys Glu Gly Arg Ala Gly Arg Gln Asp  
                     20                    25                    30  
 Gly Lys Thr Tyr Lys Phe Phe Ser Glu Leu Glu Ala Leu His Asn Thr  
                     35                    40                    45  
 Ala Ala Gly Ala Thr Val Gly Ile Ser Ser Ser Phe Lys Trp Trp Trp  
   50                    55                    60  
 Cys Cys Phe Trp His Cys Ser Pro Gly Arg Ser Leu Gly Thr Pro Ser  
   65                    70                    75                    80  
 Phe Asp Arg Asp Ile Val Arg Gln Pro Arg Pro Asn Leu His Cys Pro  
                     85                    90                    95  
 Arg

<210> 753  
 <211> 241  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 753  
 Met Glu Met Glu Asp His His Gln Tyr Thr Ala Ala Asp Leu Arg His  
   1                    5                    10                    15  
 Leu Ile Asn Ala Arg Pro Pro Pro Pro Pro His Ile Gln Ser Ile  
                     20                    25                    30  
 Ser Pro Pro Glu Leu Phe Cys Gly Gly Gly Gly His Arg Asn Pro Thr  
                     35                    40                    45  
 Gln His Leu Glu Ser Met Met Met Gly Gly Gly Gly Leu His Asn Gly  
   50                    55                    60

Gln Arg Gln Gly His Ser His Asn His Gln His His His Gln Phe Gly  
 65 70 75 80  
 Arg Asp His Ser Ser Pro Ser Ser Val Ala Met Ala Gly Ala Ala Gly  
 85 90 95  
 Gly Leu Glu Ser Glu Asn Gly Gly Asn Gly Arg Trp Pro Arg Gln Glu  
 100 105 110  
 Thr Leu Thr Leu Leu Glu Ile Arg Ser Arg Leu Asp Ser Arg Phe Lys  
 115 120 125  
 Glu Ala Asn Gln Lys Gly Pro Leu Trp Asp Glu Val Ser Arg Ile Met  
 130 135 140  
 Ser Glu Glu His Gly Tyr Gln Arg Ser Gly Lys Lys Cys Arg Glu Lys  
 145 150 155 160  
 Phe Glu Asn Leu Tyr Lys Tyr Tyr Lys Lys Thr Lys Glu Gly Lys Ala  
 165 170 175  
 Gly Arg Gln Asp Gly Lys His Tyr Arg Phe Phe Arg Gln Leu Glu Ala  
 180 185 190  
 Leu Tyr Gly Glu Asn Ala Asn Ser Asn Ser Ile Leu Gln Ala Pro Ser  
 195 200 205  
 Leu Pro His Ser Leu His Phe His Pro Pro Pro Asn Ile Asn Asp Ile  
 210 215 220  
 Asn Gln Asp Ala Ser His His Arg His Pro His Gln Leu Gln Arg Pro  
 225 230 235 240  
 Cys

<210> 754  
 <211> 104  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 754  
 Met Glu Arg Gly Asp Pro Asn Val Val Ala Val Ala Arg Leu Arg Arg  
 1 5 10 15  
 Glu Asp Cys Glu Arg Thr Lys His Asp Ser Ala Phe Ala Thr Trp Lys  
 20 25 30  
 Val Leu Val Gly Pro Thr Asp Trp Glu Asp Tyr Ser Leu Gly Lys Glu  
 35 40 45  
 Gly Ala Ala Arg Tyr Arg Val His Asn Leu Pro Lys Ser Pro Gly Pro  
 50 55 60  
 Gly Ile Tyr Glu Leu Gly Val Ala Ala Ser His Ala Lys Leu Gly Arg  
 65 70 75 80  
 Glu Ile Ala Lys Leu Asp Pro Arg Tyr Ile Val Val Val Tyr Leu Gly  
 85 90 95  
 Lys Ala Asp Cys Val Arg Thr Arg  
 100

<210> 755  
 <211> 229  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 755  
 Met Gly Tyr Ala Gln Leu Val Ile Gly Pro Ala Gly Ser Gly Lys Ser  
 1 5 10 15  
 Thr Tyr Cys Ser Ser Leu Tyr Gln His Cys Glu Ala Ile Gly Arg Thr  
 20 25 30  
 Ile His Ile Val Asn Leu Asp Pro Ala Ala Glu Asn Phe Asp Tyr Pro  
 35 40 45  
 Val Ala Met Asp Ile Arg Glu Leu Ile Ser Leu Asp Asp Val Met Glu  
 50 55 60  
 Glu Leu Gly Leu Gly Pro Asn Gly Gly Leu Met Tyr Cys Met Glu His

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65          70          75          80
Leu Glu Glu Asn Leu Asp Asp Trp Leu Thr Glu Glu Leu Asp Asn Tyr
      85          90          95
Leu Asp Asp Asp Tyr Leu Val Phe Asp Cys Pro Gly Gln Ile Glu Leu
      100        105        110
Phe Ser His Val Pro Val Leu Arg Asn Phe Val Glu His Leu Gln Arg
      115        120        125
Lys Asn Phe Asn Val Cys Gly Val Tyr Leu Leu Asp Ser Gln Phe Ile
      130        135        140
Thr Asp Val Thr Lys Phe Ile Ser Gly Cys Met Ala Ser Leu Ser Ala
      145        150        155        160
Met Val Gln Leu Glu Leu Pro His Val Asn Ile Leu Ser Lys Met Asp
      165        170        175
Leu Val Lys Asn Lys Arg Asp Ile Asp Asp Tyr Leu Asn Pro Glu Pro
      180        185        190
Arg Val Leu Leu Ser Glu Leu Asn Gln Thr Met Ala Pro Lys Phe Glu
      195        200        205
Lys Leu Asn Lys Ala Leu Ala Glu Leu Val Asp Glu Tyr Ser Met Val
      210        215        220
Ser Phe Ile Pro Leu
225

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<210> 756
<211> 81
<212> PRT
<213> Eucalyptus grandis

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<400> 756
Tyr Pro Thr Ile Ile Tyr Arg Pro Tyr Ser Phe Met Ala Lys Ile Ser
  1          5          10          15
Ala Val Glu Arg Gly His Phe Leu Thr Val Ile Pro His Phe Ala Trp
      20        25        30
Arg Leu Val Asn Pro Ala Thr Leu Lys Tyr Phe Asp Ala Pro His Arg
      35        40        45
Pro Met Tyr Met Gln Glu Tyr Leu Tyr Ser Ile Arg Asn His Arg Tyr
      50        55        60
Thr Ala Thr Met Leu Gln His Ile Ala Glu Asp Arg Asp Gly Thr Ser
65          70          75          80
His

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<210> 757
<211> 115
<212> PRT
<213> Eucalyptus grandis

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<400> 757
Met Pro Lys Gly Ser Ser Ile Lys Met Gly Val Pro Leu Gln His Ser
  1          5          10          15
Ser Gly Ile Lys Gln Leu Asn Val His Phe Gln Glu Arg Asp Leu Cys
      20        25        30
Ser Thr Gln Ser Thr Ser Gln Ser Phe Ser Glu Val Pro Asn Ile Gly
      35        40        45
Gly Ser Thr Asp Cys Ser Gln Ala Thr Val Leu Glu Gln Thr Glu His
      50        55        60
Gly Glu Thr Glu Gly Gln Ser Val Arg Gly Gln Ala Lys Ser Ala Leu
65          70          75          80
Ser Met Gly Thr Gln Asp Leu Val Phe Gln Pro Leu Glu Val Cys Ile
      85          90          95
Pro Leu His Tyr Ala Glu Pro Ser Leu Gly Gly Phe Met Pro Ala Ala
      100        105        110

```



Tyr Gly Pro  
115

<210> 758  
<211> 356  
<212> PRT  
<213> Eucalyptus grandis

<400> 758  
Met Lys Glu Arg Gln Arg Trp Arg Ala Glu Glu Asp Ala Leu Leu Arg  
1 5 10 15  
Ala Tyr Val Lys Gln Tyr Gly Pro Arg Glu Trp His Leu Val Ser Gln  
20 25 30  
Arg Met Asn Thr Pro Leu Asn Arg Asp Ala Lys Ser Cys Leu Glu Arg  
35 40 45  
Trp Lys Asn Tyr Leu Lys Pro Gly Ile Lys Lys Gly Ser Leu Ser Glu  
50 55 60  
Glu Glu Gln Arg Leu Val Ile Gln Leu Gln Ala Lys His Gly Asn Lys  
65 70 75 80  
Trp Lys Lys Ile Ala Ala Glu Ile Pro Gly Arg Thr Ala Lys Arg Leu  
85 90 95  
Gly Lys Trp Trp Glu Val Phe Lys Glu Lys Gln Gln Arg Glu Gln Lys  
100 105 110  
Glu Asn Lys Gly Ala Leu Pro Ile Asp Glu Gly Lys Tyr Asp His Ile  
115 120 125  
Leu Glu Asn Phe Ala Glu Lys Leu Val Lys Glu Arg Ser Thr Pro Ala  
130 135 140  
Leu Leu Met Ala Thr Ala Asn Gly Gly Phe Ile His Thr Asp Ser Pro  
145 150 155 160  
Ala Leu Ala Pro Thr Leu Leu Pro Pro Trp Leu Ser Asn Ser Asn Gly  
165 170 175  
Thr Pro Thr Leu Arg Pro Pro Ser Pro Ser Val Thr Leu Ser Leu Ser  
180 185 190  
Pro Ala Thr Val Pro Ala Ser Gln Pro Ile Pro Trp Leu Gln Ala Asp  
195 200 205  
Arg Gly Leu Asp Ser Gly Ser Leu Ser Leu Thr Gly Leu Pro Asn His  
210 215 220  
Gly Pro Leu Pro Thr Ser Gly Glu Asn Ile Leu Met Ser Glu Leu Ala  
225 230 235 240  
Glu Cys Cys Lys Glu Leu Glu Glu Gly His Arg Ala Trp Ala Ala His  
245 250 255  
Lys Lys Glu Ala Ala Trp Arg Leu Lys Arg Leu Glu Leu Gln Leu Glu  
260 265 270  
Ser Glu Lys Ala Cys Arg Arg Arg Glu Lys Met Glu Glu Ile Glu Ala  
275 280 285  
Lys Ile Asn Thr Leu Arg Glu Glu Lys Ala Ser Leu Asp Lys Ile  
290 295 300  
Glu Thr Glu Tyr Arg Glu Gln Leu Ala Gly Leu Arg Lys Asp Ala Glu  
305 310 315 320  
Ser Lys Glu Gln Lys Leu Ala Glu Gln Trp Thr Ala Lys His Val Gln  
325 330 335  
Leu Ser Lys Leu Ile Glu Gln Ile Gly Phe Arg Pro Arg Ile Ala Asp  
340 345 350  
His Asp Arg Gln  
355

<210> 759  
<211> 93  
<212> PRT  
<213> Eucalyptus grandis

<400> 759  
 Gly Leu Asp Ser Cys Ser Val Glu Glu Leu Gln Gln Thr Glu Asn Gln  
 1 5 10 15  
 Leu Glu Arg Ser Leu Thr Lys Ile Arg Ala Arg Lys Asn His Leu Ile  
 20 25 30  
 Arg Glu His Ile Glu Arg Leu Lys Ala Glu Glu Arg Lys Leu Leu Glu  
 35 40 45  
 Glu Lys Arg Lys Leu Leu Gln Glu Ile Glu Cys Gly Lys Gly Leu Thr  
 50 55 60  
 Pro Val Ser Ser Glu Pro Arg Glu Glu Ile Arg Ala Glu Ser Met  
 65 70 75 80  
 Asp Val Glu Thr Glu Leu Phe Ile Gly Pro Pro Lys Arg  
 85 90

<210> 760  
 <211> 70  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 760  
 Glu Asp Pro Val Gly Arg Pro Glu Ser Ala Ser Glu Ile Ser Gln Glu  
 1 5 10 15  
 Pro Gly Gln Glu Phe Met Asp Glu Asp Glu Leu Leu Asn Met Pro Lys  
 20 25 30  
 Leu Leu Asp Asp Met Ala Glu Gly Met Leu Val Ser Pro Pro Arg Thr  
 35 40 45  
 Gln Met Ala Ser Glu Asn Asp Ser Pro Glu Asp Ser Asp Gly Gly Glu  
 50 55 60  
 Ser Leu Trp Ser Tyr Pro  
 65 70

<210> 761  
 <211> 243  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 761  
 Met Cys Gly Gly Ala Ile Ile Ser Asp Phe Val Glu Glu Arg Leu Asp  
 1 5 10 15  
 Arg Arg Arg Pro Gly Ser Cys Arg Pro Glu Arg Lys Leu Thr Pro His  
 20 25 30  
 Glu Leu Trp Ser Glu Leu Asp Pro Ala Ser Asp Leu Leu Ser Leu Asp  
 35 40 45  
 Gly Pro Val Ala Gln Gly His Pro Asn Pro Phe Ser Leu Val Ala Asn  
 50 55 60  
 Gln Leu Asn Gln Val Met Lys Ser Glu Glu Lys Asn Ser Glu Glu Ala  
 65 70 75 80  
 Gly His Gly His Val Ser Glu Thr Gln Lys Ser Gln Ser Asn Gly Arg  
 85 90 95  
 Ser Gln Arg Ala Arg Lys Asn Val Tyr Arg Gly Ile Arg Gln Arg Pro  
 100 105 110  
 Trp Gly Lys Trp Ala Ala Glu Ile Arg Asp Pro His Lys Gly Val Arg  
 115 120 125  
 Val Trp Leu Gly Thr Phe Lys Thr Ala Glu Glu Ala Ala Arg Ala Tyr  
 130 135 140  
 Asp Glu Ala Ala Lys Arg Ile Arg Gly Asp Lys Ala Lys Leu Asn Phe  
 145 150 155 160  
 Ser Gly Pro Pro Ala Pro Ala Gln Pro Ser Ala Lys Lys Arg Cys Val  
 165 170 175  
 Ala Pro Asp Glu Pro Lys Asp Glu Ala Gly Ala Ala Gly Cys Glu Leu  
 180 185 190

Lys Glu Arg Ile Ala Ser Leu Glu Ser Phe Leu Glu Leu Glu Pro Thr  
 195 200 205  
 Glu Glu Pro Leu Glu Pro Gly Thr Gly Pro Ser Pro Ala Asp Leu Trp  
 210 215 220  
 Met Leu Glu Asp Leu Val Thr His His Gln His Arg Phe Asp Asn Gln  
 225 230 235 240  
 Leu Val Tyr

<210> 762  
 <211> 125  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 762  
 Gln Gln Arg Leu Leu Gln Tyr Trp Ser Asp Ala Leu Asn Leu Ser Pro  
 1 5 10 15  
 Arg Gly Arg Met Met Met Met Asn Arg Leu Gly Pro Asp Gly Arg Pro  
 20 25 30  
 Ile Phe Arg Pro Pro Gln Pro Ile Asn Thr Thr Lys Leu Tyr Arg Gly  
 35 40 45  
 Val Arg Gln Arg His Trp Gly Lys Trp Val Ala Glu Ile Arg Leu Pro  
 50 55 60  
 Arg Asn Arg Thr Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala Glu Asp  
 65 70 75 80  
 Ala Ala Leu Ala Tyr Asp Arg Glu Ala Phe Lys Leu Arg Gly Glu Asn  
 85 90 95  
 Ala Arg Leu Asn Phe Pro Glu Leu Phe Leu Asn Lys Asp Lys Ala Glu  
 100 105 110  
 Glu Ser Ala Gly Pro Ser Ser Ser Ser Ser Ser Pro Pro  
 115 120 125

<210> 763  
 <211> 141  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 763  
 Ser Ile Pro Ser Val Gly Leu Leu Val Gln Tyr Lys Leu Leu Asn Pro  
 1 5 10 15  
 Ala Ser Ser Tyr Ser Ser Cys Ile Met Ile Gln Asp Met Ser Gln Gly  
 20 25 30  
 Phe Arg Lys Ile Asp Thr Asp Arg Trp Glu Phe Ala Asn Arg Gly Phe  
 35 40 45  
 Gln Glu Gly Lys Lys His Leu Leu Lys Asn Ile Arg Arg Arg Arg Lys  
 50 55 60  
 Leu Ser Asp His Arg Thr Thr Ser Ser Ser Thr Val Ala Ser Asp Tyr  
 65 70 75 80  
 Pro Glu Ala Gly Lys Glu Ala Glu Leu Glu Met Leu Lys Arg Asp Gln  
 85 90 95  
 Glu Ala Leu Lys Ala Glu Ile Leu Lys Leu Arg Glu Glu Arg Glu Asn  
 100 105 110  
 Ser Gln His Glu Ile Asn Gln Val Ile Glu Arg Phe Arg Tyr Ala Glu  
 115 120 125  
 Cys Arg Cys Arg Arg Met Phe Leu Phe Leu Ser Lys Ala  
 130 135 140

<210> 764  
 <211> 202  
 <212> PRT  
 <213> Eucalyptus grandis

&lt;400&gt; 764

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Lys His Leu Leu Asn Asn Ile Tyr Arg Arg Lys Pro Ile His Ser His
 1          5          10          15
Ser Gly Gln Gly Ala Arg Leu Ser Asp Ser Glu Lys Gln Met Tyr Glu
          20          25          30
Glu Glu Ile Lys Arg Leu Arg His Glu Lys Ser Ser Leu Gln Leu Glu
          35          40          45
Leu Gln Arg Tyr Gln Gly Asp Asn Gln Asp Val Asp Phe Gln Ile Gln
 50          55          60
Leu Leu Arg Lys Gln Phe Gln Asn Met Glu Gln Lys Gln Thr His Leu
 65          70          75          80
Ile Thr Val Leu Ala Gln Leu Met Gln Lys Pro Val Phe Ala Ser Leu
          85          90          95
Phe Thr Gln Gln Ser Asp Ser Pro Thr Lys Lys Arg Arg Leu Ala Glu
          100          105          110
Leu Asp His Leu His Asp Ser Asp Asp Lys Ser Gly Leu Glu Ser Leu
          115          120          125
Lys Phe Gln Lys Glu Lys Phe Asn Gly Val Pro Phe Ser Leu Leu Asp
 130          135          140
Leu Asp Ser Val Glu Lys Leu Glu Gln Ser Leu His Phe Leu Glu Asn
 145          150          155          160
Leu Leu Gln Gly Val Asp Asn Thr Ser Gly Ala Glu Gln His Asp Phe
          165          170          175
Gly Ala Ile Ser Leu Pro Trp Pro Ala Gly Phe Thr Glu Arg Lys Glu
          180          185          190
Ser Leu Asp Asp Ser Asp Arg His Ile His
          195          200

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&lt;210&gt; 765

&lt;211&gt; 175

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 765

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Met Gln Pro Lys Ser Lys Ile Ser Asn Gly Val Asp Ala His Pro His
 1          5          10          15
Ser Ile Gln Thr Ser Ala Val Phe Thr Glu Pro Trp Trp Arg Gly Tyr
          20          25          30
Asn Thr Ile Ser Pro Ala Asp Pro Gly Arg Asn Glu Thr His Ala Pro
          35          40          45
Leu Gly Cys Ile Asn Gly Gly Ser Glu Ser Asn Gly Gly Gln Ser Gln
 50          55          60
Ser Asn Glu Glu Arg Val Glu Glu Asp Asp Asp Asp Asn Val Lys
 65          70          75          80
Gly Ser Gly Asn Pro Ala Cys Ser Gly Ala Val Gly Asn Gln Gly Gln
          85          90          95
Gly Pro Gln Asn Gly His Gly Ala Pro Thr Ile Ile Thr Met Arg Asp
          100          105          110
Asp Gly Leu Ala Gln Pro Pro Gln Leu Glu Leu Val Gly His Thr Ile
          115          120          125
Ala Cys Ala Ser Asn Pro Tyr Gln Asp Pro Tyr Tyr Gly Gly Leu Met
 130          135          140
Ala Gln Tyr Gly His Gln Ser Met Ala Tyr Pro Phe Val Gly Ile Pro
 145          150          155          160
His Ala Arg Met Pro Leu Pro Leu Asp Leu Ala Gln Glu Pro Cys
          165          170          175

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&lt;210&gt; 766

&lt;211&gt; 190

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 766

```

Thr Gly Ala Asn Glu Lys Asp Ser Val Met Glu Ile Thr Phe His Val
 1           5           10           15
Pro Asn Ser Asn Thr Gln Phe Val Gly Asp Glu Asn Arg Pro Pro Ala
          20           25           30
Gln Val Phe Arg Asp Arg Ile Met Ser Val Ala Asp Val Gly Ala Gly
          35           40           45
Gly Glu Asp Ala Val Val Thr Phe Glu Gly Ile Ala Ile Leu Thr Pro
          50           55           60
Arg Gly Arg Tyr Ser Val Glu Leu His Leu Ser Phe Leu Arg Leu Gln
65           70           75           80
Gly Gln Ala Asn Asp Phe Lys Ile Gln Tyr Ser Ser Val Val Arg Leu
          85           90           95
Phe Leu Leu Pro Lys Ser Asn Gln Pro His Thr Phe Val Ile Ile Thr
          100          105          110
Leu Asp Pro Pro Ile Arg Lys Gly Gln Thr Leu Tyr Pro His Ile Val
          115          120          125
Met Gln Phe Glu Thr Asp Tyr Val Val Gln Ser Thr Leu Ser Met Asn
          130          135          140
Asp Asp Leu Phe Asn Thr Lys Tyr Lys Asp Lys Leu Glu Pro Ser Tyr
145           150           155           160
Lys Gly Leu Ile His Glu Val Phe Thr Thr Ile Leu Arg Gly Leu Ser
          165           170           175
Gly Ala Lys Val Thr Lys Pro Gly Lys Phe Arg Ser Ser Gln
          180          185          190

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&lt;210&gt; 767

&lt;211&gt; 251

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 767

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Leu Glu Thr Ser Gly Asn Arg Leu Ala Arg Ala Ile Ser Asp Ala Asp
 1           5           10           15
Thr Ser Ser Ala Ala Ala Leu Met Asp Met Leu Glu Gln Met Val Ser
          20           25           30
Val Met Gly Asp Pro Ile Gln Arg Leu Gly Ala Tyr Leu Leu Glu Gly
          35           40           45
Leu Arg Ala Lys Leu Lys Phe Ser Gly Ser Ile Ile Tyr Arg Lys Leu
          50           55           60
Lys Cys Glu Glu Pro Thr Ser Ser Glu Leu Leu Thr Asn Met Gln Val
65           70           75           80
Leu Tyr Gln Ile Cys Pro Tyr Trp Lys Phe Ala Tyr Val Ser Thr Asn
          85           90           95
Val Ile Ile Thr Lys Ala Met Glu Asn Glu Gln Arg Ile His Ile Val
          100          105          110
Asp Phe Gln Ile Thr Gln Gly Ser Gln Trp Val Thr Phe Ile Gln Ala
          115          120          125
Leu Ala Gln Arg Pro Gly Gly Pro Pro Leu Leu Arg Ile Thr Gly Ile
          130          135          140
Asp Asp Ser Asp Ser Val His Ala Arg Gly Ala Gly Leu Glu Ile Val
145           150           155           160
Gly Gln Lys Leu Ser Glu Ile Ala Glu Ser Cys Asn Val Pro Phe Glu
          165           170           175
Phe His Asp Ala Ala Val Ser Leu Ser Glu Val Glu Leu Gln Asn Leu
          180          185          190
Met Ile Arg Pro Gly Asp Ala Leu Ala Val Asn Cys Pro Tyr Ile Leu
          195          200          205
His His Ile Pro Asp Glu Ser Val Ser Thr Gln Asn His Arg Asp Arg

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210	215	220
Val Leu Arg Leu Ile Lys Ser Leu Ser Pro Arg Val Val Thr Leu Val		
225	230	235
Glu Gln Glu Ser Asn Thr Asn Thr Ser Ser Phe		240
	245	250

<210> 768  
 <211> 174  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 768

Gly	Asn	Trp	Asp	Glu	Pro	Thr	Lys	Glu	Glu	Val	Asn	Glu	Pro	Ala	Asp
1				5				10						15	
Ile	Ala	Glu	Ala	Lys	Thr	Val	Ser	Asp	Ser	Glu	Glu	Ala	Lys	Pro	Asn
			20					25					30		
Ala	Lys	Arg	Lys	Gln	Pro	Glu	Lys	Glu	Ala	Ser	Glu	Lys	Glu	Ala	Ser
		35					40					45			
Lys	Lys	Glu	Pro	Asn	Lys	Pro	Pro	Asn	Ser	Trp	Phe	Asp	Leu	Lys	Val
	50					55					60				
Asn	Thr	His	Val	Tyr	Val	Thr	Gly	Leu	Pro	Glu	Asp	Val	Thr	Met	Glu
65				70						75				80	
Glu	Val	Val	Glu	Val	Phe	Ser	Lys	Cys	Gly	Ile	Leu	Lys	Glu	Asp	Pro
			85					90						95	
Glu	Thr	Lys	Lys	Pro	Arg	Val	Lys	Ile	Tyr	Val	Asp	Lys	Glu	Thr	Gly
			100					105					110		
Arg	Lys	Lys	Gly	Asp	Ala	Leu	Val	Thr	Tyr	Leu	Lys	Glu	Pro	Ser	Val
		115					120					125			
Ala	Leu	Ala	Ile	Gln	Ile	Leu	Asp	Gly	Ala	Pro	Phe	Arg	Pro	Gly	Gly
	130					135					140				
Lys	Val	Pro	Met	Ser	Val	Ser	Gln	Ala	Lys	Phe	Glu	Gln	Lys	Gly	Asp
145				150						155				160	
Lys	Phe	Ile	Ser	Lys	Gln	Val	Asp	Gly	Lys	Lys	Lys	Arg	Asn		
				165				170							

<210> 769  
 <211> 218  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 769

Thr	Phe	Glu	Gln	Leu	Leu	Leu	Pro	Phe	Leu	Tyr	Glu	Leu	Gln	Ile	Leu
1				5				10						15	
Ile	Asp	Leu	Ser	Asn	Asp	Lys	Ala	Thr	Val	Leu	Thr	Asp	Lys	Ile	Gln
			20					25					30		
Val	Leu	Lys	Asp	Leu	Thr	Thr	Glu	Val	Asn	Lys	Leu	Lys	Ala	Glu	Cys
		35					40					45			
Ala	Ala	Leu	Ile	Glu	Glu	Ser	Arg	Glu	Glu	Lys	Asn	Glu	Leu	Arg	Glu
	50					55					60				
Glu	Lys	Ser	Ser	Leu	Lys	Ser	Glu	Val	Glu	Asn	Leu	Asn	Val	Gln	Tyr
65				70						75				80	
Gln	Gln	Arg	Thr	Arg	Val	Met	Tyr	Pro	Trp	Ala	Ala	Met	Asp	Pro	Ser
			85					90					95		
Val	Val	Met	Gly	Pro	Ala	Tyr	Ser	Tyr	Pro	Gly	Pro	Ile	Pro	Val	Thr
			100					105					110		
Pro	Gly	Pro	Ile	Pro	Met	Leu	Ser	Gln	Leu	Gln	Pro	Phe	Pro	Phe	Phe
		115					120					125			
Gly	Asn	Gln	Asn	Ala	Ser	Ala	Ile	Pro	Ala	Pro	Cys	Ser	Thr	Phe	Ile
	130					135					140				
Pro	Asn	Ser	Met	Pro	Ala	Asn	Pro	Thr	Phe	Glu	Gln	Gln	Ser	Thr	Gln
145					150					155					160

Tyr Ala Ser Thr Ser His Val Ser Asn Lys Lys Asp Ser Lys Ser Arg  
                                   165                                  170                                  175  
 Ser Ser Asp His Gln Arg Gly Ser Ile Ala Glu Gln Asp Glu Asp Ser  
                                   180                                  185                                  190  
 Asn Asn Val Ala Thr Asp Leu Glu Leu Lys Met Pro Gly Thr Ser Ser  
                                   195                                  200                                  205  
 His Gln Asp Leu Thr Ser Gly Glu Lys Lys  
                                   210                                  215

&lt;210&gt; 770

&lt;211&gt; 188

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 770

His Pro Met Lys Pro Glu Ser Val Glu Val Leu Asn Phe Gly Asp Ser  
   1                                  5                                  10                                  15  
 Gly Ser Gly Arg Leu Leu Ser Ser His Ser Gln Val Ala Val Ala Glu  
                                   20                                  25                                  30  
 Glu Pro Leu Asn His Val Glu Ala Glu Arg Gln Arg Arg Glu Lys Leu  
                                   35                                  40                                  45  
 Asn Gln Arg Phe Tyr Ala Leu Arg Ala Val Val Pro Asn Val Ser Lys  
                                   50                                  55                                  60  
 Met Asp Lys Ala Ser Leu Leu Gln Asp Ala Glu Ser Tyr Ile Arg Glu  
  65                                  70                                  75                                  80  
 Leu Asn Met Asn Leu Gln Ala Ala Glu Ser Asp Lys Glu Asp Leu Lys  
                                   85                                  90                                  95  
 Lys Gln Leu Asp Glu Leu Lys Lys Arg Ser Ser Asp Lys Glu Cys Ile  
                                   100                                  105                                  110  
 Pro Val Asp Gln Asp Arg Lys Met Ala Lys Pro Thr Gly Ser Arg Ser  
                                   115                                  120                                  125  
 Thr Gly Val Ala Ile Asp Val Lys Ile Met Gly Trp Asp Ala Val Val  
                                   130                                  135                                  140  
 Arg Val Glu Ser Gly Arg Lys Asp His Pro Ala Ala Arg Leu Met Val  
  145                                  150                                  155                                  160  
 Ala Leu Gln Glu Leu Asn Leu Glu Leu Gln His Ala Ser Val Ser Val  
                                   165                                  170                                  175  
 Val Asn Glu Leu Met Ile Gln Gln Ala Thr Val Lys  
                                   180                                  185

&lt;210&gt; 771

&lt;211&gt; 157

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 771

Met Met Leu Gly Glu Pro His Arg Pro Pro Asn Pro Thr Ile Asp Val  
   1                                  5                                  10                                  15  
 Pro Pro Trp Pro Ile Leu Asp Asp Pro Thr Asp Asp Ala Val Pro His  
                                   20                                  25                                  30  
 Ser Pro Tyr Ser Pro Tyr Thr Leu Asn Ala Gly Tyr Gly Gly Gly Cys  
                                   35                                  40                                  45  
 Asp Ser Ser Pro Ser Ala Ala Gly Pro Gly His Phe Gln Asp Val Met  
                                   50                                  55                                  60  
 Ala Ala Leu Arg Arg Phe Leu Pro Ser Asn Arg Pro Asp Thr Asp Pro  
  65                                  70                                  75                                  80  
 Asp Pro Asp Met Thr Ser Ser Arg Glu Ala Asp Phe Pro Met Asp Val  
                                   85                                  90                                  95  
 Tyr Ser Cys Asp Asn Phe Arg Met Tyr Glu Phe Lys Val Arg Arg Cys  
                                   100                                  105                                  110  
 Ala Arg Gly Arg Ser His Asp Trp Thr Glu Cys Pro Tyr Ala His Pro

			115				120					125				
Gly	Glu	Lys	Ala	Arg	Arg	Arg	Asp	Pro	Arg	Lys	Tyr	His	Tyr	Ser	Gly	
			130				135					140				
Thr	Ala	Cys	Pro	Glu	Phe	Arg	Lys	Gly	Ser	Cys	Arg	Lys				
						150					155					

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<210> 772
<211> 129
<212> PRT
<213> Eucalyptus grandis
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[illegible]

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<210> 773
<211> 149
<212> PRT
<213> Eucalyptus grandis
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[illegible]

<210>	774
<211>	175
<212>	PRT



&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 774

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Met Val Lys Arg Asp Arg Glu Asp Thr Glu Val Glu Ala Leu Ala Arg
 1          5          10          15
Ala Asn Cys Leu Met Leu Leu Ser Arg Val Gly Glu Ser Thr Asp Ser
          20          25          30
Ala Ser Pro Asp Arg Lys Ser Arg Pro Thr Glu Arg Met Phe Ala Cys
          35          40          45
Lys Thr Cys Asn Arg Glu Phe Ser Ser Phe Gln Ala Leu Gly Gly His
          50          55          60
Lys Ala Ser His Lys Lys Pro Lys Leu Ile Ser Gly Asp Leu Phe His
65          70          75          80
Leu Gly His Ala Ala Asp Ser Ser Pro Ala Lys Pro Lys Thr His Glu
          85          90          95
Cys Ser Ile Cys Gly Leu Asp Phe Pro Met Gly Gln Ala Leu Gly Gly
          100          105          110
His Met Arg Arg His Arg Ala Ala Met Leu Glu Ser Leu Ala Ala Ala
          115          120          125
Ala Ala Lys Pro Val Pro Val Leu Lys Lys Ser Asn Ser Lys Arg Val
          130          135          140
Thr Gly Leu Asp Leu Asn Ser Leu Pro Met Glu Asp Asp Leu Thr Leu
145          150          155          160
Arg Leu Gly Lys Val Ala Pro Pro Leu Val Leu Asp Leu Val Leu
          165          170          175

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&lt;210&gt; 775

&lt;211&gt; 154

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 775

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Pro Asp Ala Ala Gly Glu Arg Leu Gly His Gly Asp Gln Glu Glu Pro
 1          5          10          15
Leu Gly Val Gly Gly Val Gly Leu Pro Gly Arg Ala Tyr Phe Ser Ser
          20          25          30
Asn Pro Ala Trp Val Thr Gly Ala Glu Arg Leu Gly Asn Cys Gly Cys
          35          40          45
Asp Arg Ala Arg Gln Ala Gln Ile Phe Gly Leu Gln Thr Ile Ala Cys
          50          55          60
Val Pro Val Leu Asn Gly Val Val Glu Leu Gly Ser Thr Glu Pro Ile
65          70          75          80
Tyr Gln Ser Ser Asp Leu Ile Ser Gly Ile Arg Gly Leu Phe Asn Phe
          85          90          95
His Glu Ser Glu Met Gly Cys Gly Gly Arg Val Leu Asn Ser Glu His
          100          105          110
Asp Pro Ala Ser Leu Trp Ile Cys Asp Pro Pro Val Thr Met Glu Ile
          115          120          125
Asn Asp Arg Pro Met Thr Phe Gln Ile Glu Asn Pro Ser Ser Ser Ser
          130          135          140
Leu Thr Glu Ser Pro Ser Ala Ile Cys Ala
145          150

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&lt;210&gt; 776

&lt;211&gt; 177

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 776

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Leu Gly Thr Gln Ile Pro Ser Gly Ile His Met Pro Ser Ala Asn Leu
 1          5          10          15

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Ser Ser Ile Ser Ile Leu Gly Pro Ile Pro Met Val Ser Gly Asp Gly  
 20 25 30  
 Gly Gly Arg Thr Gly Ser Glu Arg Ser Arg Asn Ala Asp Cys Ala Pro  
 35 40 45  
 Ala Gly Phe Pro Gly Gly Asp Glu Asp Val Asn Lys Gly Gly Asp Ile  
 50 55 60  
 Pro Tyr Gly Met Ser Thr Ile Val Arg Val Ile Pro Asn Ser Arg Tyr  
 65 70 75 80  
 Leu Arg Val Ala Gln Leu Leu Asp Glu Ile Val Asn Val Arg Lys  
 85 90 95  
 Ala Leu Lys Arg Pro Asp Asp Ala Asn Asp Gln Ser Arg His Glu Asn  
 100 105 110  
 Gln Arg Ser Pro Lys Asp Ala Asp Gly Gly Ser Lys Asn Glu Ala Ser  
 115 120 125  
 Ser Asn Pro Gln Glu Ser Ala Ser Asn Ser Ser Glu Leu Ser Ala Ala  
 130 135 140  
 Glu Lys Gln Asp Leu Gln Asn Lys Leu Thr Lys Leu Leu Ser Met Leu  
 145 150 155 160  
 Asp Glu Val Asp Lys Arg Tyr Lys Gln Tyr Tyr His Gln Met Gln Ile  
 165 170 175  
 Val

<210> 777  
 <211> 59  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 777  
 Gly Asn Glu Val Ser Ser Asp Tyr Gly Trp Lys Phe Leu Phe Ala Gly  
 1 5 10 15  
 Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu  
 20 25 30  
 Arg Pro Asp Ile Lys Arg Gly Asn Ile Ser Pro Asp Glu Glu Glu Leu  
 35 40 45  
 Ile Ile Arg Leu His Lys Leu Leu Gly Asn Arg  
 50 55

<210> 778  
 <211> 175  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 778  
 Met His His Pro Pro Asn Pro Asp Ser Leu Ser Leu Leu Gln Ser Ala  
 1 5 10 15  
 Arg Thr Pro Asn Ala Pro Pro Glu His Pro Val Pro Ser Thr Ser Arg  
 20 25 30  
 Arg Asp Glu Val Ala Val Leu Lys Ser Gln Lys Ala Gly Arg Glu Lys  
 35 40 45  
 Leu Arg Arg Asp Arg Leu Asn Glu His Phe Ile Glu Leu Gly Asn Thr  
 50 55 60  
 Leu Asp Pro Asp Arg Pro Lys Asn Asp Lys Ala Thr Ile Leu Ser Asp  
 65 70 75 80  
 Thr Val Gln Leu Leu Lys Asp Leu Thr Ala Gln Val Asn Gln Leu Lys  
 85 90 95  
 Ala Glu Tyr Ser Thr Phe Cys Glu Glu Ser Arg Glu Leu Thr Gln Glu  
 100 105 110  
 Lys Asn Asp Leu Lys Glu Glu Lys Ala Ser Leu Lys Ser Asp Ile Glu  
 115 120 125  
 Ser Leu Asn Ala Gln Tyr Gln Gln Arg Ala Arg Ala Met Phe Pro Trp

130	135	140
Pro Ile Met Asp His Ser Val Val Met Ala	Pro Pro Ser Tyr Pro Tyr	
145	150	155
Pro Val Pro Val Ala Val Pro Ser Gly	Pro Ile Pro Val His Pro	160
	165	170
		175

<210> 779  
 <211> 162  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 779

Met Asn Val Glu Lys Leu Met Lys Met Ala Gly Ser Val Arg Thr Gly	
1	5 10 15
Gly Lys Gly Thr Met Arg Arg Lys Lys Lys Ala Val His Lys Thr Thr	
	20 25 30
Thr Thr Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Ile Gly Val	
	35 40 45
Asn Ala Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Asp Val	
	50 55 60
Val Ile Gln Phe Val Asn Pro Lys Val Gln Ala Ser Ile Ala Ala Asn	
65	70 75 80
Thr Trp Val Val Ser Gly Ala Pro Gln Thr Lys Lys Leu Gln Asp Ile	
	85 90 95
Leu Pro Gly Ile Ile Asn Gln Leu Gly Pro Asp Asn Leu Asp Asn Leu	
	100 105 110
Arg Lys Leu Ala Glu Gln Phe Gln Lys Gln Ser Pro Gly Ala Ala Ala	
	115 120 125
Thr Ala Gly Ala Thr Ala Met Gln Glu Asp Asp Asp Glu Val Pro	
	130 135 140
Glu Leu Val Pro Gly Glu Thr Phe Glu Ala Ala Ala Glu Glu Gly His	
145	150 155 160
Lys Ser	

<210> 780  
 <211> 151  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 780

Met Gly Glu Pro Ile Phe Leu Pro Gly Arg Thr Ser Leu Val Gly Ser	
1	5 10 15
Ile Ser Val Asn Val Val Gly Ile Gln His Asn Ala Gly Thr Phe Arg	
	20 25 30
Ala Gly Glu Thr Val Ala Leu Val Arg Glu Pro Ser Asn Thr Asp Asp	
	35 40 45
Glu Met Ala Ile Gln Val Leu Asn Thr Arg Gly Met Val Val Gly Tyr	
	50 55 60
Ile Lys Arg Glu Ala Ala Lys Val Leu Ala Pro Leu Ile Asp Ser Gln	
65	70 75 80
Leu Ile Ser Val Tyr Ala Ile Val Pro Lys Val Pro Arg Val Glu Lys	
	85 90 95
Leu Phe Phe Ile Asn Cys Gln Val Arg Val Leu Ala Arg Asp Asp Asp	
	100 105 110
Phe Glu His Val Lys Ser Thr Ile Leu Glu Gly Lys Leu Met Leu Thr	
	115 120 125
Pro Pro Val Gly Lys Glu Val Arg Gly Val Asn Glu Ser Phe Thr Leu	
	130 135 140
Val Gly Gln Gly Val Glu Lys	
145	150

<210> 781  
 <211> 611  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 781  
 Met Met Met Phe Glu Asp Met Gly Ile Cys Gly Asp Leu Asp Phe Phe  
 1 5 10 15  
 Ser Ala Pro Leu Gly Glu Gly His Gly Val Ala Pro Gln Thr Glu Pro  
 20 25 30  
 Glu Ala Thr Val Glu Asp Asp Tyr Ser Asp Glu Glu Ile Asp Val Asp  
 35 40 45  
 Glu Leu Glu Arg Arg Met Trp Arg Asp Lys Met Arg Leu Lys Arg Leu  
 50 55 60  
 Lys Glu Gln Asn Lys Gly Lys Glu Gly Val Asp Ile Ala Lys Gln Arg  
 65 70 75 80  
 Gln Ser Gln Glu Gln Ala Arg Arg Lys Lys Met Ser Arg Ala Gln Asp  
 85 90 95  
 Gly Ile Leu Lys Tyr Met Leu Lys Met Met Glu Val Cys Lys Ala Gln  
 100 105 110  
 Gly Phe Val Tyr Gly Ile Ile Pro Glu Lys Gly Lys Pro Val Thr Gly  
 115 120 125  
 Ala Ser Asp Asn Leu Arg Glu Trp Trp Lys Asp Lys Val Arg Phe Asp  
 130 135 140  
 Arg Asn Gly Pro Ala Ala Ile Ala Lys Tyr Gln Ala Asp His Ser Val  
 145 150 155 160  
 Pro Gly Lys Asn Asp Gly Cys Asn Pro Ile Gly Pro Thr Pro His Thr  
 165 170 175  
 Leu Gln Glu Leu Gln Asp Thr Thr Leu Gly Ser Leu Leu Ser Ala Leu  
 180 185 190  
 Met Gln His Cys Asp Pro Pro Gln Arg Arg Phe Pro Leu Glu Lys Gly  
 195 200 205  
 Val Pro Pro Pro Trp Trp Pro Thr Gly Asn Glu Asp Trp Trp Pro Gln  
 210 215 220  
 Leu Gly Leu Pro Lys Asp Gln Gly Ala Pro Pro Tyr Lys Lys Pro His  
 225 230 235 240  
 Asp Leu Lys Lys Ala Trp Lys Val Gly Val Leu Thr Ala Val Ile Lys  
 245 250 255  
 His Met Ser Pro Asp Ile Ala Lys Ile Arg Lys Leu Val Arg Gln Ser  
 260 265 270  
 Lys Cys Leu Gln Asp Lys Met Thr Ala Lys Glu Ser Ala Thr Trp Leu  
 275 280 285  
 Ala Ile Ile Asn Gln Glu Glu Ser Leu Ala Arg Glu Leu Tyr Pro Asp  
 290 295 300  
 Ser Cys Leu Pro Leu Ser Ser Gly Gly Ser Gly Ser Leu Val Ile  
 305 310 315 320  
 Asn Asp Cys Ser Glu Tyr Asp Val Glu Gly Met Glu Asp Glu Pro Asn  
 325 330 335  
 Tyr Asp Val Gln Glu Arg Lys Pro Glu Asn Leu Asn Pro Pro Ser His  
 340 345 350  
 Leu Gly Leu Glu Arg Met Arg Gly Pro Phe Val Gln Gln Ser Pro Phe  
 355 360 365  
 Gln Met Lys Gly Glu Val Val Ser Asn Leu Asp Met Ala Arg Lys Arg  
 370 375 380  
 Lys Pro Cys Asn Asp Leu Asn Met Val Met Asp His Lys Ile Phe Thr  
 385 390 395 400  
 Cys Glu Phe Leu Gln Cys Pro Tyr Ser Glu Leu Arg Leu Gly Phe Arg  
 405 410 415  
 Asp Arg Thr Ser Arg Asp Asn His Gln Leu Ser Cys Pro Tyr Arg Ser  
 420 425 430

Asn Ser Ser Glu Phe Gly Gly Ser Asn Phe His Val Asn Glu Val Lys  
                   435                                  440                                  445  
 Pro Val Ile Phe Pro Gln Gly Phe Val Gln Ser Lys Pro Met Thr Ser  
                   450                                  455                                  460  
 Thr Val Asn Ser Ala Ser Thr Pro Phe Asp Leu Ser Gly Leu Gly Val  
 465                                  470                                  475                                  480  
 Pro Glu Asp Gly Gln Lys Val Ile Ser Asp Leu Met Ser Ile Tyr Asp  
                                   485                                  490                                  495  
 Thr Ser Ile Gln Gly Asn Lys Asn Met Asn Pro Ala Asn Asp Ala Ile  
                                   500                                  505                                  510  
 Ile Glu Asp Gln Ser Arg Pro Gln Pro Lys Leu Gln Gln Gln Asn Glu  
                                   515                                  520                                  525  
 Phe Val Gly Ser Phe Phe Gln Gln Pro Asn Ala Ser Ala Asn His His  
                                   530                                  535                                  540  
 Met Phe Ser Arg Glu Asp Ile Gln Phe Asp Arg Phe Lys Thr Met Asn  
 545                                  550                                  555                                  560  
 Ser Ser Phe Glu Ala Asn Asn His Asn His Asp Asn Leu Gln Leu Met  
                                   565                                  570                                  575  
 Phe Gly Ser Pro Phe Asp Leu Ser Ser Phe Asp Phe Lys Glu Glu Leu  
                                   580                                  585                                  590  
 Pro Gly Gly Val Met Asp Pro Leu Pro Lys Gln Asp Val Thr Ile Trp  
                                   595                                  600                                  605  
 Phe Gln Gln  
                   610

<210> 782  
 <211> 133  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 782  
 Met Val Lys Arg Asp Arg Glu Asp Thr Glu Val Glu Ala Leu Ala Leu  
 1                                  5                                  10                                  15  
 Ala Asn Cys Leu Met Leu Leu Ser Arg Val Gly Lys Ser Thr Asp Ser  
                                   20                                  25                                  30  
 Pro Trp Leu Asn His Lys Ser Arg Pro Thr Glu Arg Met Phe Ala Cys  
                                   35                                  40                                  45  
 Lys Thr Cys Asn Arg Glu Phe Ser Ser Phe Gln Ala Leu Gly Gly His  
                                   50                                  55                                  60  
 Arg Ala Ser His Lys Lys Pro Lys Leu Ser Gly Asp Leu Phe His Leu  
 65                                  70                                  75                                  80  
 Gly Arg Ser Ala Asp Ser Ser Pro Ala Lys Pro Lys Thr His Glu Cys  
                                   85                                  90                                  95  
 Ala Ile Cys Gly Leu Glu Phe Pro Leu Gly Gln Ala Leu Gly Gly His  
                                   100                                  105                                  110  
 Met Arg Arg His Arg Ala Ala Met Ala Glu Ser Leu Ala Thr Ala Glu  
                                   115                                  120                                  125  
 Lys Pro Val Pro Val  
                   130

<210> 783  
 <211> 145  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 783  
 Met Val Met Asp Ile Ser Asn Asp Asp Arg Tyr Leu Asn Glu Glu Ile  
 1                                  5                                  10                                  15  
 Gly Gly Pro Lys Asp Ala Leu Asp Asp Gly Thr Gln Pro Asn Asn Lys  
                                   20                                  25                                  30  
 Arg Lys Arg Gly Arg Ala Pro Lys Arg Ala Met Lys Ala Glu Arg Glu

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      35              40              45
Lys Leu Lys Arg Asp His Leu Asn Glu Leu Phe Asp Lys Leu Gly Ser
  50              55              60
Leu Leu Glu Leu Ser Glu Pro Asn Asn Gly Lys Ala Ser Ile Ile Asn
  65              70              75              80
Glu Thr Ile Arg Leu Leu Lys Asp Met Ile Ser Gln Ile Gln Ser Leu
      85              90              95
Arg Lys Glu Asn Thr Thr Leu Leu Ser Glu Ser His Tyr Val Ala Ala
      100              105              110
Glu Thr Asn Glu Leu Lys Asp Glu Asn Phe Ala Leu Glu Ala Gln Ile
      115              120              125
Lys Asn Val Gln Arg Glu Leu Glu Asp Lys Leu Gly His Ser Lys Pro
      130              135              140
Asp
145

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<210> 784
<211> 322
<212> PRT
<213> Eucalyptus grandis

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      <400> 784
Glu Cys Leu Pro Leu Leu Asp Met Thr Gln Gln Pro Pro Trp Gln Glu
  1              5              10              15
Leu Val Ala Thr Asp Leu His Gly Asn Glu Trp His Phe Arg His Ile
      20              25              30
Phe Arg Gly Gln Pro Arg Arg His Leu Leu Thr Thr Gly Trp Ser Val
      35              40              45
Phe Val Ser Ser Lys Lys Leu Ile Ala Gly Asp Ala Phe Ile Phe Leu
      50              55              60
Arg Gly Glu Asp Gly Glu Leu Arg Val Gly Val Arg Arg Leu Met Arg
  65              70              75              80
Gln Gln Ser Asn Met Pro Ser Ser Val Ile Ser Ser His Ser Met His
      85              90              95
Leu Gly Val Leu Ala Thr Ala Ser His Ala Ile Ala Thr Gly Thr Leu
      100              105              110
Phe Ser Val Phe Tyr Lys Pro Arg Thr Ser Arg Ser Glu Phe Ile Val
      115              120              125
Ser Leu Asn Lys Tyr Leu Glu Ala Arg Ala His Lys Leu Ser Ile Gly
      130              135              140
Met Arg Phe Lys Met Lys Phe Glu Gly Glu Glu Val Ser Glu Arg Arg
  145              150              155              160
Phe Ser Gly Thr Ile Ile Gly Val Gly Asp Ser Met Ser Ser Gly Trp
      165              170              175
Thr Asn Ser Glu Trp Arg Ser Leu Lys Val Gln Trp Asp Glu Pro Ser
      180              185              190
Ser Ile Met Arg Pro Asp Arg Val Ser Ser Trp Glu Leu Glu Pro Leu
      195              200              205
Val Val Thr Ala Pro Ser Asn Ser Gln Gln Val Gln Arg Lys Arg Ala
      210              215              220
Arg Pro Thr Val Leu Pro Ser Ser Ser Val Gln Glu Leu Ser Ala Phe
  225              230              235              240
Gly Gly Pro Lys Ala Pro Glu Tyr Ser Ser Asp Phe Leu His Gly Asp
      245              250              255
Ser Gln Arg Gly Arg Asp Val Tyr Leu Ser Pro Lys Phe Ser Pro Ser
      260              265              270
Ala Arg Ser Lys Ser Leu Asn Tyr Asn Gly Asn Gly Ser Pro Ala Ala
      275              280              285
Leu Ser Gly Tyr Thr Val Asn Trp Pro Ser His Met Glu Thr Ile Thr
      290              295              300
Asp Pro Cys Thr Pro Val Asn Gly Lys Glu Ser Ser Glu Lys Arg Glu

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305  
Ser Gly

310

315

320

<210> 785  
<211> 50  
<212> PRT  
<213> Eucalyptus grandis

<400> 785  
Met Ala Ser Gln Phe Asn Phe Lys Gly Ile Thr Asp Ala Ser Gln Ala  
1 5 10 15  
Glu Gly Val Ala Gly Lys Ser His Gly Asn His Ser Leu Thr Arg Gln  
20 25 30  
Pro Ser Ile Tyr Ala Leu Thr Phe Asp Glu Phe Gln Asn Thr Trp Gly  
35 40 45  
Gly Leu  
50

<210> 786  
<211> 152  
<212> PRT  
<213> Eucalyptus grandis

<400> 786  
Glu Thr Ser Pro Ser Ser Ser Ser Leu Thr Thr Thr Thr Ala Pro Ala  
1 5 10 15  
Pro Ala Ala Ala Ala Ala Ala Ala Thr Thr Ser Ser Ser Ser Tyr Ser  
20 25 30  
Ser Ala Val Ala Val Ala Ala Thr Thr Ala Thr Thr Ser Ser Ser  
35 40 45  
Thr Ser Ser Thr Gly Ser Asp Pro Ala Leu Glu Pro Ser Lys Arg Ser  
50 55 60  
Glu Asp Cys Thr Ser Gln Lys Gly Pro Gly Lys Ser Pro Ser Pro Gly  
65 70 75 80  
Ala His Pro Glu Glu Pro Ala Gly Lys Arg His Lys Ala Gly Gly Ser  
85 90 95  
Gly Glu His Pro Thr Tyr Arg Gly Val Arg Met Arg Asn Trp Gly Lys  
100 105 110  
Trp Val Ser Glu Ile Arg Glu Pro Arg Lys Lys Ser Arg Ile Trp Leu  
115 120 125  
Gly Thr Tyr Pro Thr Ala Glu Met Ala Ala Arg Ala His Asp Val Ala  
130 135 140  
Ala Leu Ala Ile Lys Gly Ser Phe  
145 150

<210> 787  
<211> 148  
<212> PRT  
<213> Eucalyptus grandis

<400> 787  
Met Phe Pro Arg Pro Lys Val Asp Pro Ala Ser Ala Gly Thr Val Val  
1 5 10 15  
Ile Arg Glu Val Trp Ala His Asn Leu Glu Ser Glu Phe Asp Leu Ile  
20 25 30  
Arg Asp Val Val Asp Thr His Pro Phe Ile Ser Met Asp Thr Glu Phe  
35 40 45  
Pro Gly Val Val Phe Arg Pro Pro Pro Pro Ser Ala Gly Gly His  
50 55 60  
Tyr Arg Arg Leu Arg Pro Ser Asp His Tyr Arg Leu Leu Lys Ser Asn

65 70 75 80  
 Val Asp Ala Leu Ser Leu Ile Gln Val Gly Leu Thr Phe Ser Asp Pro  
 85 90 95  
 Asp Gly Asn Leu Pro Asp Leu Gly Cys Pro Gly Gly Pro Arg Tyr Ile  
 100 105 110  
 Trp Glu Phe Asn Phe Arg Asp Phe Asp Val Ala Arg Asp Ala His Ala  
 115 120 125  
 Pro Asp Ser Ile Glu Leu Leu Arg Arg Gln Gly Ile Asp Phe Glu Arg  
 130 135 140  
 Asn Arg Ala Glu  
 145

<210> 788  
 <211> 248  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 788  
 Lys Pro Ser Glu Arg Arg Gly Gly Pro Arg Gly Pro Phe Arg Gly Ser  
 1 5 10 15  
 Gly Gly Arg Arg Gly Gly Phe Asn Asn Gly Glu Ala Gly Glu Gly Glu  
 20 25 30  
 Arg Pro Arg Arg Thr Phe Glu Arg Arg Ser Gly Thr Gly Arg Gly Asn  
 35 40 45  
 Glu Phe Lys Arg Asp Gly Ala Gly Arg Gly Asn Trp Gly Thr Pro Thr  
 50 55 60  
 Asp Glu Ile Ala Pro Glu Pro Glu Glu Pro Val Val Glu Val Glu Lys  
 65 70 75 80  
 Asn Val Gly Ser Glu Lys Gln Leu Val Asp Glu Glu Ala Ala Asp Ala  
 85 90 95  
 Ser Lys Glu Asn Pro Leu Asn Glu Pro Glu Glu Lys Glu Pro Glu Asp  
 100 105 110  
 Lys Glu Met Thr Leu Glu Glu Tyr Glu Lys Val Arg Glu Glu Lys Arg  
 115 120 125  
 Lys Ala Leu Leu Ala Leu Lys Ala Glu Glu Arg Lys Val Glu Val Asp  
 130 135 140  
 Lys Glu Leu Lys Ser Met Gln Gln Leu Ser Ser Lys Lys Glu Asn His  
 145 150 155 160  
 Asp Ile Phe Ile Lys Leu Gly Ser Glu Lys Asp Lys Arg Lys Glu Ala  
 165 170 175  
 Ala Glu Lys Glu Glu Arg Ala Glu Lys Ser Val Ser Ile Asn Glu Phe  
 180 185 190  
 Leu Lys Pro Ala Glu Gly Glu Arg Tyr Tyr Asn Pro Gly Gly Arg Gly  
 195 200 205  
 Arg Gly Arg Gly Arg Gly Ala Arg Gly Gly Tyr Gly Gly Gly Gly  
 210 215 220  
 Gly Gly Tyr Gly Arg Asp Ala Ala Ala Pro Ser Ile Lys Asp Pro Gly  
 225 230 235 240  
 Gln Phe Pro Ser Leu Gly Gly Lys  
 245

<210> 789  
 <211> 55  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 789  
 Met Ser Phe Thr Gly Thr Gln Val Lys Cys Lys Ala Cys Glu Lys Thr  
 1 5 10 15  
 Val Tyr Pro Val Glu Gln Leu Ser Ala Asp Gly Val Ala Tyr His Lys  
 20 25 30



Ser Cys Phe Lys Cys Ser His Cys Lys Gly Thr Leu Lys Val Cys Gln  
           35                          40                          45  
 Phe Phe Gln Leu Val Tyr Asn  
      50                          55

<210> 790  
 <211> 148  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 790  
 Met Ile Asp Leu Asn Thr Val Glu Asp Asp Glu Thr Pro Ser Ser Gly  
   1                          5                          10                          15  
 Ser Ser Pro Ala Ser Ser Leu Ser Ser Ala Ile Ser Ala Ser Asn Ile  
           20                          25                          30  
 Asn Ser Asn Pro Ala Tyr Pro Thr Ser Ser Ser Ser Ser Ser Ser Ser  
           35                          40                          45  
 Cys Ser Pro Leu Cys Leu Glu Leu Trp His Ala Cys Ala Gly Pro Leu  
      50                          55                          60  
 Ile Ser Leu Pro Lys Arg Gly Ser Leu Val Val Tyr Phe Pro Gln Gly  
 65                          70                          75                          80  
 His Leu Glu His Val Ser Asp Phe Pro Thr Ser Val Phe Asp Leu Pro  
           85                          90                          95  
 Ser Gln Ile Phe Cys Arg Val Val Asp Val Lys Leu His Ala Asp Ala  
           100                          105                          110  
 Ser Thr Asp Asp Val Tyr Ala Gln Val Ser Leu Val Pro Glu Arg Glu  
           115                          120                          125  
 Gln Ile Glu His Lys Leu Arg Glu Gly Asp Asn Glu Ile Asp Leu Asp  
 130                          135                          140  
 Glu Asp Glu Ile  
 145

<210> 791  
 <211> 106  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 791  
 Met Ala Ser His Pro Ser Asn His Ser Cys Gly Arg Pro His Gln Gly  
   1                          5                          10                          15  
 Ala Phe Ala Asp Ala Leu Tyr Lys Glu Leu Trp His Ala Cys Ala Gly  
           20                          25                          30  
 Pro Leu Val Thr Leu Pro Arg Glu Gly Glu Arg Val Tyr Tyr Phe Pro  
           35                          40                          45  
 Gln Gly His Met Glu Gln Leu Glu Ala Ser Thr Asn Arg Gly Leu Glu  
      50                          55                          60  
 Gln Gln Met Pro Ser Phe Asp Leu Pro Ser Lys Ile Leu Cys Arg Val  
 65                          70                          75                          80  
 Val Asn Ile Gln Leu Arg Ala Glu Pro Glu Thr Asp Glu Val Tyr Ser  
           85                          90                          95  
 Gln Ile Thr Leu Leu Pro Glu Pro Glu Gln  
           100                          105

<210> 792  
 <211> 82  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 792  
 Glu Gln Tyr Leu Asn Leu Ala Tyr Val Gln Gln Leu Glu Asn Ser Arg  
   1                          5                          10                          15

Phe Arg Leu Met Gln Leu Glu Gln Glu Leu Gln Arg Ala Arg Gln Gln  
                   20                  25                  30  
 Gly Ile Phe Val Ser Ser Gly Asn Pro Gly Asp Leu Ser His Asn Met  
           35                  40                  45  
 Ala Ala Ile Gly Asn Gly Ala Met Ala Phe Asp Thr Asp Tyr Ala Arg  
           50                  55                  60  
 Trp Leu Asp Glu His Gln Arg Leu Ile Asn Asp Leu Arg Ser Gly Val  
   65                  70                  75                  80  
 Asn Phe

<210> 793  
 <211> 247  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 793  
 Phe Phe Leu Tyr Ile Ile Ser Leu Phe Leu Val Arg Glu Asn Ser Glu  
   1                  5                  10                  15  
 Arg Ser Arg Glu Gly Thr Ser Ser Asn Gly Asp Gly Lys Ser Glu Val  
           20                  25                  30  
 Gln Gly Lys Val Ala Gly Glu Val Asp Ala Ala Ser Glu Asn Val Ser  
           35                  40                  45  
 Gly Gly Ala Ile Glu Arg Pro Arg Ala Thr Gly Lys Leu Ala Ala Pro  
           50                  55                  60  
 Val Asn Ser Pro Ser Met Ser Ser Ser Leu Asp Leu Lys Asn Ser Cys  
   65                  70                  75                  80  
 Met Asp Ala Asn Ala Asn Pro Val Ser Ile Leu Gln Pro Gly Val Val  
                   85                  90                  95  
 Pro Pro Glu Ala Trp Leu Gln Asn Glu Arg Glu Leu Lys Arg Glu Arg  
           100                  105                  110  
 Arg Lys Gln Ser Asn Arg Glu Ser Ala Arg Arg Ser Arg Leu Arg Lys  
           115                  120                  125  
 Gln Ala Glu Thr Glu Glu Leu Ala Lys Lys Val Asp Ser Leu Ser Ala  
           130                  135                  140  
 Glu Asn Arg Ala Leu Lys Ser Glu Ile Ser Gln Leu Thr Glu Asn Ser  
   145                  150                  155                  160  
 Asp Lys Leu Arg Leu Glu Asn Ala Thr Leu Met Glu Arg Leu Glu Asn  
           165                  170                  175  
 Ala Gln Gly Val Glu Lys Ala Val Glu Ser Leu Gly Lys Phe Asn Asp  
           180                  185                  190  
 Asn Gly Leu Leu Ser Asp Lys Thr Glu Asn Leu Leu Ser Arg Val Asn  
           195                  200                  205  
 Asn Ser Gly Ala Val Asp Arg Arg Ser Glu Asp Glu Gly Glu Ile Tyr  
   210                  215                  220  
 Glu Arg Lys Ser Asn Ser Gly Ala Lys Leu His Gln Leu Leu Asp Ser  
   225                  230                  235                  240  
 Lys Pro Arg Thr Asp Ala Val  
                   245

<210> 794  
 <211> 145  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 794  
 Phe Ser Leu Ser Pro His His Leu Lys Met Glu Val Ala Pro Gln Ala  
   1                  5                  10                  15  
 Glu His His Gln Asn His His His His His His Gln Tyr His His Gln  
           20                  25                  30  
 Pro Gln Gln Gly Glu Pro Gly Ser Tyr Phe Leu Ser Ala Pro Pro Pro

```

      35              40              45
Pro Pro His Tyr Ser Ser Ser Gly Leu Cys Tyr Gly Gly Gly Val Gly
  50              55              60
Asp Asn Asn Asn Gly Gly Tyr Leu His Ser Pro Leu Ser Val Met Pro
65              70              75              80
Leu Lys Ser Asp Gly Ser Leu Cys Ile Met Glu Ala Leu Thr Arg Ser
      85              90              95
Arg Pro Gln Gly Leu Gly Gln Gly Ser Thr Pro Lys Leu Glu Asp Phe
      100              105              110
Leu Gly Gly Ala Ser Ala Thr Val Thr Ala Thr Thr Met Pro Leu Ser
      115              120              125
Leu Asp Ser Leu Tyr Ser Tyr Gln Gln Ser Ala Asp Pro Glu Lys Gln
      130              135              140
Ser
145

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<210> 795
<211> 220
<212> PRT
<213> Eucalyptus grandis

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      <400> 795
Glu Thr Gln Arg Glu Lys Val Glu Arg Glu Arg Glu Thr Ser Ile Pro
  1              5              10              15
Ser Gln Ser Pro Gln Pro Thr Ile Leu Pro Pro Thr Ala Ser Ser Pro
      20              25              30
Gly Arg Ser Asp Pro Pro Gly Asp Ala Thr Thr Met Val Lys Pro Ser
      35              40              45
Gly Gly Gly Gly Asp Arg Ala Pro Pro Leu Ala Pro Phe Leu Ser Lys
      50              55              60
Cys Tyr Glu Met Val Glu Asp Glu Ala Thr Asp Pro Ile Ile Ala Trp
65              70              75              80
Gly Ser Ala Gly Asp Thr Phe Val Ile Trp Asp Ile Thr Gln Phe Thr
      85              90              95
Leu Gln Leu Leu Pro His Tyr Phe Lys His Ser Asn Phe Ser Ser Phe
      100              105              110
Met Arg Gln Leu Asn Ile Tyr Gly Phe Arg Lys Val Asp Ser Asp Arg
      115              120              125
Trp Glu Phe Ala Asn Asp Gly Phe Ile Arg Gly Gln Lys His Met Leu
      130              135              140
Lys Asn Ile Arg Arg Arg Lys Asn Val Gln Val Val Asp Gln Lys Lys
145              150              155              160
Ser Leu Gln Lys Gln Asp Asn Ser Val Glu Glu Val Asp Lys Ile Lys
      165              170              175
Ile Asp Gly Leu Trp Lys Glu Val Glu Asn Leu Lys Ile Asp Lys Thr
      180              185              190
Val Leu Ser Leu Glu Leu Gly Lys Val Arg Gln Leu Gln Glu Thr Ser
      195              200              205
Asp Asn Lys Leu Val Leu Leu Arg Asp Arg Val Gln
      210              215              220

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<210> 796
<211> 212
<212> PRT
<213> Eucalyptus grandis

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      <400> 796
Met Ile Gly Ala Ala Thr Asn Gln Ile Pro Pro Pro Pro Pro Pro Pro
  1              5              10              15
Gln Pro Gln Gln Ala Ala Pro Ala Ala Ala Ala Ile Arg Phe Pro Asp
      20              25              30

```

Ser Val Tyr Asn Ala Leu Arg Val Gly Ala Val Phe Gln Arg Leu Ser  
 35 40 45  
 Lys His Leu Ala Thr Ile Gly Lys Gly Ser Gly Leu Ser Ala Ser Cys  
 50 55 60  
 Gly Thr Ser Met Glu Phe Leu Asn Ser Cys Leu Cys Leu Ala Arg Gly  
 65 70 75 80  
 Ile Asp Tyr Ala Val Ala Asn Asn Glu Val Leu Pro Lys Ala His Glu  
 85 90 95  
 Leu Pro Val Leu Leu Lys Arg Leu Cys Leu Leu Lys Asp Asp Ser Phe  
 100 105 110  
 Tyr Leu Ser Val Ile Met Val Leu Met Ile Ser Val Lys Asn Ala Cys  
 115 120 125  
 Lys Tyr Lys Trp Phe Ser Glu Lys Asp Cys Gln Glu Leu Leu Ala Leu  
 130 135 140  
 Val Asp Glu Ile Gly Lys Asn Phe Gln Ser Pro Arg Asp Ala Ala Val  
 145 150 155 160  
 Gly Ser Thr Ala Ser Phe Ser Arg Val Ser Ser Ile Phe Ala Arg Phe  
 165 170 175  
 Tyr Pro Gln Leu Lys Met Gly Tyr Asp Leu Ile Ser Leu Glu Val Glu  
 180 185 190  
 Pro Gly Tyr Ala Ala Leu Val Asn Asp Phe His Ile Ser Lys Ser Met  
 195 200 205  
 Val His Ser Pro  
 210

&lt;210&gt; 797

&lt;211&gt; 269

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 797

Met Asn Ser Thr Thr Thr Gln Phe Val Ser Ser Arg Arg Met Gly Met  
 1 5 10 15  
 Tyr Asp Pro Ile His Gln Ile Gly Met Trp Asp Glu Asn Phe Lys Gln  
 20 25 30  
 Asn Gly Asn Pro Asn Ala Pro Pro Ala Leu Ile Ile Pro Met His Ala  
 35 40 45  
 Asn Leu Asp Asn Gln Ser Glu Asp Thr Ser His Gly Ser Gln Asp Thr  
 50 55 60  
 Ala Gly Lys Tyr Glu Gln Glu Thr Ser Lys Pro Tyr Asp Lys Val Gln  
 65 70 75 80  
 Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser Arg Leu Arg  
 85 90 95  
 Lys Lys Ala Tyr Val Gln Gln Leu Glu Ala Ser Arg Leu Lys Leu Met  
 100 105 110  
 Gln Leu Glu Gln Glu Val Asp Arg Ala Arg Gln Gln Gly Val Tyr Met  
 115 120 125  
 Ala Ser Gly Val Asp Ser Ala Tyr Pro Gly Tyr Gly Gly Cys Leu Asn  
 130 135 140  
 Ser Gly Ile Val Ala Phe Glu Met Glu Tyr Gly His Trp Ile Asp Glu  
 145 150 155 160  
 Gln Asn Arg Gln Ile Cys Glu Leu Arg Ala Ala Leu Asn Asp His Arg  
 165 170 175  
 Thr Asp Val Glu Leu Arg Ile Leu Val Glu Ser Gly Met Asn His Tyr  
 180 185 190  
 Leu Glu Leu Phe Arg Met Lys Ala Val Ala Ser Lys Ala Asp Val Phe  
 195 200 205  
 Tyr Val Met Ser Gly Met Trp Arg Thr Ser Ser Glu Arg Phe Phe Leu  
 210 215 220  
 Trp Ile Gly Gly Phe Arg Pro Ser Glu Leu Leu Lys Val Leu Met Pro  
 225 230 235 240

Gln Leu Asp Pro Leu Ser Asp Gln Gln Trp Ala Phe Val Ser Asn Leu  
                                   245                                  250                                  255  
 Arg Gln Ala Cys Gln Gln Ala Glu Asp Ala Leu Lys Gln  
                                   260                                  265

<210> 798  
 <211> 145  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 798  
 Ile Asn Thr Thr Pro Gln Phe Leu Ser Leu Arg Ser His Pro Asn Arg  
   1                                  5                                  10                                  15  
 His Pro Gln Ser Leu Ser Phe Ser Leu Phe Phe Ser Val Cys Pro Val  
                                   20                                  25                                  30  
 Cys Asp Lys Gly Phe Pro Ser Tyr Gln Ala Leu Gly Gly His Lys Ala  
                                   35                                  40                                  45  
 Ser His Arg Lys His Ala Ser Ser Ala Ala Ala Ala Gly Gly Asp  
   50                                  55                                  60  
 Asp Gln Pro Thr Thr Ser Ser Thr Ser Ala Ala Thr Thr Ser Ser Gly  
  65                                  70                                  75                                  80  
 Val Ser Gly Lys Val His Glu Cys Ser Ile Cys His Lys Ser Phe Pro  
                                   85                                  90                                  95  
 Thr Gly Gln Ala Leu Gly Gly His Lys Arg Cys His Tyr Glu Ala Pro  
                                   100                                  105                                  110  
 Ala Pro Ile Pro Ala Ser Phe Ser Ala Pro Ser Ala Ala Ala Ala Pro  
                                   115                                  120                                  125  
 Ala Ala Ser Gly Val Ser Val Ser Glu Gly Val Gly Ser Thr His Thr  
  130                                  135                                  140  
 Gln  
 145

<210> 799  
 <211> 121  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 799  
 Arg His His Lys Ile Gln Gln Leu Gln Arg Ala Arg Ser Glu Leu Ala  
   1                                  5                                  10                                  15  
 Arg Met Phe Ser Leu Glu Gly Gln Leu Glu Asp Pro Val Arg Ser Gly  
                                   20                                  25                                  30  
 Trp Gln Leu Val Phe Val Asp Arg Glu Asn Asp Ser Leu Leu Leu Gly  
                                   35                                  40                                  45  
 Asp Gly Pro Trp Pro Glu Phe Val Asn Ser Val Trp Cys Ile Lys Ile  
   50                                  55                                  60  
 Leu Ser Pro Gln Glu Val Gln Gln Met Gly Lys Gln Asp Leu Glu Leu  
  65                                  70                                  75                                  80  
 Leu Asn Ser Ile Pro Val Gln Arg His Ser Asn Gly Gly Cys Asp Glu  
                                   85                                  90                                  95  
 Phe Thr Asn Arg Gln Asp Ser Arg Thr Ile Asn Ser Gly Ile Pro Ser  
                                   100                                  105                                  110  
 Val Gly Ser Leu Asp Tyr Gly Thr Leu  
                                   115                                  120

<210> 800  
 <211> 182  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 800

Thr Asp Asp Thr Gly Asp Lys Asn His Arg Phe Glu Gly Gly Gln Leu  
 1 5 10 15  
 Gly Val Ala Ala Ala Ser Asp Ser Ser Asp Arg Ser Lys Glu Lys Ala  
 20 25 30  
 Thr Asp Gln Lys Thr Leu Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala  
 35 40 45  
 Arg Lys Ser Arg Leu Arg Lys Lys Ala Tyr Val Gln Gln Leu Glu Ser  
 50 55 60  
 Ser Arg Leu Lys Leu Thr Gln Leu Glu Gln Glu Leu Gln Arg Ala Arg  
 65 70 75 80  
 Gln Gln Gly Ile Phe Ile Ser Gly Ser Gly Glu Gln Ser His Ser Met  
 85 90 95  
 Ser Gly Asn Gly Ala Leu Ala Phe Asp Val Glu Tyr Ala Arg Trp Leu  
 100 105 110  
 Glu Glu His Asn Lys Val Val Asn Glu Leu Arg Asn Ala Val Asn Ala  
 115 120 125  
 His Ala Gly Asp Thr Glu Leu Arg Thr Ile Val Asp Asn Val Ala Ala  
 130 135 140  
 His Phe Asp Glu Ile Phe Lys Leu Lys Gly Thr Ala Ala Lys Ala Asp  
 145 150 155 160  
 Val Phe His Ile Leu Ser Gly Met Trp Lys Thr Pro Ala Glu Arg Cys  
 165 170 175  
 Phe Met Trp Ile Gly Gly  
 180

<210> 801  
 <211> 74  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 801  
 Met Ser Phe Thr Gly Thr Gln Val Lys Cys Lys Ala Cys Glu Lys Thr  
 1 5 10 15  
 Val Tyr Pro Val Glu Gln Leu Ser Ala Asp Gly Val Ala Tyr His Lys  
 20 25 30  
 Ser Cys Phe Lys Cys Ser His Cys Lys Gly Thr Leu Lys Leu Ser Ser  
 35 40 45  
 Tyr Ser Ser Met Glu Gly Val Leu Tyr Cys Lys Pro His Phe Glu Gln  
 50 55 60  
 Leu Phe Lys Glu Thr Gly Asn Phe Asn Lys  
 65 70

<210> 802  
 <211> 194  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 802  
 Lys Ser Val Phe His Val Phe Tyr Ser Pro Arg Ala Ser His Ala Glu  
 1 5 10 15  
 Phe Val Val Pro Tyr Gln Lys Tyr Leu Lys Ser Ile Asn Asn Val Ile  
 20 25 30  
 Cys Ile Gly Thr Arg Phe Lys Met Arg Val Asp Val Asp Asp Ala Pro  
 35 40 45  
 Glu Lys Arg Cys Thr Gly Val Val Thr Arg Ile Gly Asp Leu Asp Pro  
 50 55 60  
 Tyr Arg Trp Pro Asn Ser Lys Trp Arg Cys Leu Met Val Gln Trp Asp  
 65 70 75 80  
 Asp Asp Ile Thr Asn Gly His Gln Asp Arg Val Ser Pro Trp Glu Ile  
 85 90 95  
 Asp Pro Ser Val Ser His Ser Pro Leu Ser Ile Gln Ser Ser Pro Arg

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      100      105      110
Leu Lys Arg Pro Arg Thr Ser Leu Pro Thr Met Pro Pro Val Pro Gly
      115      120      125
Gly Gly Val Arg Leu Leu Asp Phe Glu Glu Ser Leu Arg Ser Ser Lys
      130      135      140
Val Leu Gln Gly Gln Glu Lys Leu His Leu Val Ser Pro Val Tyr Gly
145      150      155      160
Arg Asp Thr Leu Asn Cys Gln Val Asp Phe Glu Gln Ser Pro Ala His
      165      170      175
Gln Gly Leu Ala Ser Val Val Ser Lys Lys Arg Pro Thr Ile Ser Met
      180      185      190
Ser Thr

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<210> 803
<211> 282
<212> PRT
<213> Eucalyptus grandis

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      <400> 803
Arg Arg Ala Asn Arg Pro Gln Thr Val Met Pro Ser Ser Val Leu Ser
 1      5      10      15
Ser Asp Ser Met His Ile Gly Leu Leu Ala Ala Ala Ala His Ala Ala
      20      25      30
Ala Thr Asn Ser Arg Phe Thr Ile Phe Tyr Asn Pro Arg Ala Ser Pro
      35      40      45
Ser Glu Phe Val Ile Pro Leu Ala Lys Tyr Val Lys Ala Val Tyr His
      50      55      60
Thr Arg Val Ser Val Gly Met Arg Phe Arg Met Leu Phe Glu Thr Glu
65      70      75      80
Glu Ser Ser Val Arg Arg Tyr Met Gly Thr Ile Thr Gly Ile Ser Asp
      85      90      95
Leu Asp Pro Val Arg Trp Gln Asn Ser His Trp Arg Ser Val Lys Val
      100      105      110
Gly Trp Asp Glu Ser Thr Ala Gly Glu Arg Gln Pro Arg Val Ser Leu
      115      120      125
Trp Glu Ile Glu Pro Leu Thr Phe Pro Met Tyr Pro Ser Pro Phe
      130      135      140
Pro Leu Arg Leu Lys Arg Pro Trp Pro Ser Gly Leu Pro Ser Phe His
145      150      155      160
Ala Leu Arg Asp Gly Asp Met Ser Ile Ser Ser Ser Leu Met Trp Leu
      165      170      175
Gln Gly Val Gly Asp Gln Gly Val Gln Ser Leu Asn Phe Gln Gly Phe
      180      185      190
Gly Met Thr Pro Trp Leu Gln Pro Arg Tyr Asp Thr Ser Met Ala Ala
      195      200      205
Leu Gln Thr Asp Val Tyr Gln Ala Met Ala Ser Ala Ala Leu Gln Asp
      210      215      220
Met Arg Ala Val Asp Pro Ser Lys Cys Ala Ser Gln Ser Leu Leu Pro
225      230      235      240
Leu Gln Gln Ser Gln Asn Val Pro Met Gly Gln Ala Ser Ile Ile Gln
      245      250      255
Arg Gln Met Leu Gln Gln Ser Gln Ser Gln Asn Ser Leu Leu Gln Gly
      260      265      270
Phe Gln Glu Asn Gln Ala Lys Pro Lys Gly
      275      280

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<210> 804
<211> 177
<212> PRT
<213> Eucalyptus grandis

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&lt;400&gt; 804

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Asp Lys Leu Arg Glu Ile Glu Asn Ser Leu Phe Gly Pro Glu Ser Asp
 1           5           10           15
Ile Ser Asp Ser Cys Asn Cys Cys Leu Asn Ser Gly Ser His Gln Phe
          20           25           30
Pro Ser Thr Gly Gln Trp Asn Val Asn Gln Met Ile Glu Met Ile Pro
          35           40           45
Lys Leu Asp Leu Lys Asp Met Leu Ile Val Cys Ala Gln Ala Val Ala
          50           55           60
Glu Ala Asp Met Pro Arg Thr Ala Ala Leu Met Glu Val Leu Glu Arg
          65           70           75           80
Met Val Ser Val Ser Gly Asp Pro Ile Gln Arg Leu Gly Ala Tyr Leu
          85           90           95
Leu Glu Gly Leu Arg Ala Arg Leu Glu Ser Ser Gly Ser Ile Ile Tyr
          100          105          110
Arg Lys Leu Lys Cys Lys Glu Pro Thr Gly Ser Glu Leu Met Ser Tyr
          115          120          125
Met Ser Ile Leu Tyr Gln Ile Cys Pro Tyr Trp Lys Phe Ala Tyr Glu
          130          135          140
Ser Ala Asn Val Val Ile Gly Glu Ala Ile Lys Tyr Glu Ser Arg Ile
          145          150          155          160
His Ile Ile Asp Phe Gln Ile Ala Gln Gly Ser Gln Trp Ile Pro Ile
          165          170          175
Ile

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&lt;210&gt; 805

&lt;211&gt; 86

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 805

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Met Gly Arg Ser Pro Arg Cys Asp Lys Asp Gly Leu Asn Lys Gly Ala
 1           5           10           15
Trp Thr Ala Ala Glu Asp Gln Ile Leu Met Asp Tyr Val Lys Leu His
          20           25           30
Gly Glu Gly Lys Trp Ser Arg Leu Ser Arg Glu Thr Gly Leu Arg Arg
          35           40           45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu Arg Pro Asp
          50           55           60
Ile Lys Arg Gly Asn Ile Ser Pro Asp Glu Glu Glu Leu Ile Ile Arg
          65           70           75           80
Leu His Lys Leu Leu Gly
          85

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&lt;210&gt; 806

&lt;211&gt; 133

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 806

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Met Arg Leu Ser Ser Ser Gly Phe Asn His Gln Ser Pro Glu Ala Ser
 1           5           10           15
Asn Ala Gly Glu Lys Lys Cys Leu Asn Ser Glu Leu Trp His Ala Cys
          20           25           30
Ala Gly Pro Leu Val Ser Leu Pro Pro Val Gly Ser Arg Val Val Tyr
          35           40           45
Phe Pro Gln Gly His Ser Glu Gln Val Ala Ala Ser Thr Asn Lys Glu
          50           55           60
Val Asp Ala His Ile Pro Asn Tyr Pro Asn Leu Ser Pro Gln Leu Ile

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65 70 75 80  
 Cys Gln Leu His Asn Val Thr Met His Ala Asp Val Glu Thr Asp Glu  
 85 90 95  
 Val Tyr Ala Gln Met Thr Leu Gln Pro Leu Ser Pro Gln Glu Gln Lys  
 100 105 110  
 Asp Leu Tyr Leu Leu Pro Ala Glu Leu Gly Thr Pro Ser Lys Gln Pro  
 115 120 125  
 Thr Asn Tyr Phe Cys  
 130

<210> 807  
 <211> 222  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 807  
 Ser Pro Phe Leu Ser Leu Thr Thr Ser Ser Ser Ser Ser Pro Pro Arg  
 1 5 10 15  
 Arg Lys Ile Arg Thr Leu Gly Arg Ala Asn Arg Arg Asn Pro Ser  
 20 25 30  
 Pro Ala Glu Val Ala Ala Ala Ala Val His Ala Tyr Leu Ser Arg Arg  
 35 40 45  
 Arg Pro Ala Glu Arg Ile Leu Leu Arg Ser Gly Pro Met Ser Pro Ala  
 50 55 60  
 Arg Ser Lys Pro Ile Ala Ile Arg Ala Val Phe Tyr Ala Asn Leu Glu  
 65 70 75 80  
 Ser Glu Phe Ala Leu Ile Arg Ser Val Val Asp Arg Phe Pro Ile Ile  
 85 90 95  
 Ser Met Asp Thr Glu Phe Pro Gly Thr Val Ile Arg Pro Gly Pro Ala  
 100 105 110  
 Gly Gly Gly Gly Gly Arg Ala Leu Pro Pro Pro Glu Ser Asn Tyr Gly  
 115 120 125  
 Leu Leu Lys Ala Asn Val Asp Arg Met His Met Ile Gln Ile Gly Leu  
 130 135 140  
 Thr Leu Ser Asp Gly Glu Gly Asn Leu Pro Asp Phe Gly Thr Lys Cys  
 145 150 155 160  
 Ala Tyr Ile Trp Glu Phe Asn Phe Arg Asp Phe Asp Ala Ala Arg Asp  
 165 170 175  
 Val Gln Asn Pro Asp Ser Val Ala Leu Leu Arg Lys Gln Gly Ile Asp  
 180 185 190  
 Phe Glu Met Asn Arg Gln Lys Gly Ala Asp Ser Ala Arg Phe Gly Glu  
 195 200 205  
 Leu Leu Met Ser Ser Gly Leu Val Cys Asn Asp Glu Val Ser  
 210 215 220

<210> 808  
 <211> 111  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 808  
 Arg Gly Gly Phe Asn Met Glu Lys Leu Ala Arg Gly Ser Val Gln Glu  
 1 5 10 15  
 Glu His Leu Asn Ala Ala Val Ala Leu Asp Glu Gly Trp Tyr Cys Thr  
 20 25 30  
 Pro Arg Met Leu His Phe Ser Phe Glu Asn Glu Phe Lys Arg Asp Gly  
 35 40 45  
 Ala Gly Arg Gly Asn Trp Gly Thr Pro Thr Asp Glu Ile Ala Pro Glu  
 50 55 60  
 Pro Glu Glu Pro Val Val Glu Val Glu Lys Asn Val Gly Ser Glu Lys  
 65 70 75 80

Gln Leu Val Asp Glu Glu Ala Ala Asp Ala Ser Lys Glu Asn Pro Leu  
                             85                            90                            95  
 Asn Glu Pro Glu Glu Lys Glu Pro Glu Asp Lys Glu Met Thr Leu  
                             100                            105                            110

<210> 809  
 <211> 159  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 809  
 Gln Ser Gly Leu Pro Leu Asp Asp Arg Pro Glu Gly Ala Arg Ser Pro  
   1                            5                            10                            15  
 Ser Pro Glu Pro Ile Tyr Asp Asn Met Gly Ile Arg Ile Asn Thr Arg  
                             20                            25                            30  
 Glu Tyr Arg Ala Arg Glu Arg Leu Asn Lys Glu Arg Gln Asp Ile Ile  
                             35                            40                            45  
 Thr Gln Ile Ile Lys Arg Asn Pro Ala Phe Lys Pro Pro Ala Asp Tyr  
   50                            55                            60  
 Arg Pro Pro Lys Leu Gln Lys Lys Leu Tyr Ile Pro Met Lys Glu Tyr  
  65                            70                            75                            80  
 Pro Gly Tyr Asn Phe Ile Gly Leu Ile Ile Gly Pro Arg Gly Asn Thr  
                             85                            90                            95  
 Gln Lys Arg Met Glu Arg Glu Thr Gly Ala Lys Ile Val Ile Arg Gly  
                             100                            105                            110  
 Lys Gly Ser Val Lys Glu Gly Arg Leu Gln Gln Lys Arg Asp Leu Lys  
                             115                            120                            125  
 Pro Asp Pro Ala Glu Asn Glu Asp Leu His Val Leu Val Glu Ala Glu  
  130                            135                            140  
 Thr Gln Glu Ala Leu Asp Ala Ala Ala Gly Met Val Glu Lys Leu  
 145                            150                            155

<210> 810  
 <211> 387  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 810  
 Met Cys Gly Gly Ala Ile Ile Ser Asp Phe Ile Pro Asn Gln Arg Ala  
   1                            5                            10                            15  
 Arg Arg Leu Thr Ser Asp Phe Leu Trp Pro Asp Leu Lys Arg Ser Ala  
                             20                            25                            30  
 Gly Lys Gln Ser Arg Arg Pro Ala Arg Ser Glu Val Val Asp Val Val  
                             35                            40                            45  
 Asp Asp Asp Phe Glu Ala Asp Phe Gln Gly Phe Lys Asp Glu Ser Asp  
  50                            55                            60  
 Val Glu Asp Asp Phe Asp Glu Val Glu Val Asp Val Lys Pro Phe  
  65                            70                            75                            80  
 Ala Phe Ser Ala Ala Glu Pro Arg Tyr Ser Lys Gly Ser Ser Thr Thr  
                             85                            90                            95  
 Lys Ser Val Glu Tyr Asn Gly Gln Ala Glu Lys Ser Ala Lys Arg Lys  
                             100                            105                            110  
 Arg Lys Asn Gln Tyr Arg Gly Ile Arg Gln Arg Pro Trp Gly Lys Trp  
                             115                            120                            125  
 Ala Ala Glu Ile Arg Asp Pro Arg Lys Gly Val Arg Val Trp Leu Gly  
  130                            135                            140  
 Thr Phe Asn Thr Ala Glu Glu Ala Ala Arg Ala Tyr Asp Ala Glu Ala  
 145                            150                            155                            160  
 Arg Arg Ile Arg Gly Lys Lys Ala Lys Val Asn Phe Pro Asp Asp Ser  
                             165                            170                            175  
 Ser Ser Ala Ser Ser Lys Arg Ser Val Lys Ser Asn Val Gln Lys Leu

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      180      185      190
Pro Lys Thr Thr Asn Asn Val Gln Pro Asn Leu Asn Gln Asn Phe
      195      200      205
Asn Tyr Ala Asn Ser Ser Asp Asp Asp Ile Tyr Ser Ser Met Gly Phe
      210      215      220
Val Glu Glu Lys Pro Pro Thr Asn Gln Phe Tyr Met Asp Ala Leu Asn
225      230      235      240
Ala Gln Gly Val Ser Gly Met Asn Ser Leu Ser Pro Ala Asp Asn Ala
      245      250      255
Pro Leu Tyr Phe Asn Ser Asp Gln Gly Ser Asn Ser Phe Glu Cys Ser
      260      265      270
Asp Phe Gly Trp Gly Glu Asn Ala Pro Arg Thr Pro Asp Val Ser Ser
      275      280      285
Val Leu Ser Ala Thr Leu Glu Val Asp Glu Ser Gln Phe Glu Asp Ala
      290      295      300
Asn Pro Arg Lys Lys Ile Arg Ser Ala Ser Asp Asp Val Ser Glu Glu
305      310      315      320
Glu Asn Thr Ala Ala Lys Thr Phe Ser Glu Glu Leu Ser Ala Phe Glu
      325      330      335
Ser Asp Met Lys Phe Phe Gln Met Pro Phe Val Asp Gly Gly Trp Asp
      340      345      350
Pro Ser Val Glu Ala Leu Leu Gly Gly Glu Ala Thr Gln Asp Gly Gly
      355      360      365
Asn Ala Val Asp Leu Trp Ser Phe Asp Asp Leu Ala Pro Met Met Gly
      370      375      380
Gly Val Phe
385

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<210> 811
<211> 219
<212> PRT
<213> Eucalyptus grandis

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      <400> 811
His Gly Gly Ala Ala Gly Phe Leu Gly Pro Arg Ala Val Pro Met Lys
 1      5      10
Gln Ala Gly Leu Ala Gln Lys Pro Thr Lys Leu Tyr Arg Gly Val Arg
      20      25      30
Gln Arg His Trp Gly Lys Trp Val Ala Glu Ile Arg Leu Pro Lys Asn
      35      40      45
Arg Thr Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala Glu Glu Ala Ala
      50      55      60
Leu Ala Tyr Asp Lys Ala Ala Tyr Arg Leu Arg Gly Asp Phe Ala Arg
      65      70      75      80
Leu Asn Phe Pro His Leu Lys His Lys Gly Ser His Ile Gln Gly Asp
      85      90      95
Phe Gly Asp Tyr Lys Pro Leu His Ser Ser Val Asp Ala Lys Leu Gln
      100      105      110
Ala Ile Cys Gln Asp Met Ala Glu Lys Pro Ala Asp Gly Lys Lys Arg
      115      120      125
Arg Ser Ala Pro Ala Gly Gly Gly Ser Ser Ala Ala Ala Ala Ser Pro
      130      135      140
Arg Arg Pro Glu Pro Glu Pro Glu Pro Val Lys Thr Glu Val Gly Val
      145      150      155      160
Ser Ala Ala Thr Ser Ser Ser Pro Glu Ser Asp Asp Ala Ser Val Glu
      165      170      175
Glu Ser Ser Pro Leu Ser Glu Leu Thr Phe Asn Asp Phe Val Glu Pro
      180      185      190
Gln Trp Glu Ser Val Gly Val Pro Glu Asn Phe Ser Leu Gln Lys Tyr
      195      200      205
Pro Ser Glu Ile Asp Trp Ala Ala Ile Tyr Ser

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210

215

<210> 812  
 <211> 75  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 812  
 Met Lys Glu Arg Gln Arg Trp Arg Ala Glu Glu Asp Ala Leu Leu Arg  
 1 5 10 15  
 Ala Tyr Val Lys Gln Tyr Gly Pro Arg Glu Trp His Leu Val Ser Gln  
 20 25 30  
 Arg Met Asn Thr Pro Leu Asn Arg Asp Ala Lys Ser Cys Leu Glu Arg  
 35 40 45  
 Trp Lys Asn Tyr Leu Lys Pro Gly Ile Lys Lys Gly Ser Leu Ser Glu  
 50 55 60  
 Glu Glu Gln Arg Leu Val Phe His Leu Leu Pro  
 65 70 75

<210> 813  
 <211> 235  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 813  
 Val Val Leu Pro Ser Ser Gly Met Val Lys Ser Ser Gly Gly Ala Gly  
 1 5 10 15  
 Asp Ser Asp His Ser Asp Leu Glu Ala Ser Val Val Lys Glu Ala Asp  
 20 25 30  
 Ser Ser Arg Val Val Glu Pro Glu Lys Arg Pro Arg Lys Arg Gly Arg  
 35 40 45  
 Lys Pro Ala Asn Gly Arg Glu Glu Pro Leu Asn His Val Glu Ala Glu  
 50 55 60  
 Arg Gln Arg Arg Glu Lys Leu Asn Gln Arg Phe Tyr Ala Leu Arg Ala  
 65 70 75 80  
 Val Val Pro Asn Val Ser Lys Met Asp Lys Ala Ser Leu Leu Gly Asp  
 85 90 95  
 Ala Ile Ala Tyr Ile Lys Glu Leu Asn Ser Lys Leu Gln Thr Thr Glu  
 100 105 110  
 Ser Asp Lys Glu Asn Leu Gln Lys Gln Met Glu Ser Leu Lys Lys Glu  
 115 120 125  
 Leu Thr Asn Lys Asp Ser Arg Ser Ala Leu Pro Gln Ser Asp Lys Asp  
 130 135 140  
 Leu Ser Ile Ser Ser Asn His Gly Ala Lys Leu Ile Glu Leu Asp Val  
 145 150 155 160  
 Asp Val Lys Ile Ile Gly Trp Asp Val Met Ile Arg Ile Gln Ser Ser  
 165 170 175  
 Lys Lys Asn His Pro Ala Ala Lys Leu Met Gln Ala Leu Met Glu Leu  
 180 185 190  
 Asp Leu Asp Val His His Ala Ser Val Ser Val Val Asn Asp Leu Met  
 195 200 205  
 Ile Gln Gln Ala Thr Val Lys Met Ser Gly Arg Phe Tyr Ser Gln Glu  
 210 215 220  
 Gln Leu Arg Leu Ala Leu Ser Ser Lys Ile Gly  
 225 230 235

<210> 814  
 <211> 111  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 814  
 Glu Leu Lys Pro Asp Lys Ile Gly Leu Gln Arg Ser Glu Gln Leu Arg  
 1 5 10 15  
 Asp Leu Tyr Glu Ser Leu Leu Glu Gly Thr Asp Ala Gln Asn Lys  
 20 25 30  
 Arg Pro Ser Ala Ala Leu Ser Pro Glu Asp Leu Thr Asp Glu Glu Trp  
 35 40 45  
 Tyr Tyr Leu Val Cys Met Ser Phe Val Phe Asn Pro Gly Glu Gly Leu  
 50 55 60  
 Pro Gly Arg Ala Leu Ala Asp Gly Gln Thr Ile Trp Leu Cys Asn Ala  
 65 70 75 80  
 Gln Tyr Ala Asp Ser Lys Val Phe Ser Arg Ser Leu Leu Ala Lys Ser  
 85 90 95  
 Ala Ser Ile Gln Thr Val Val Cys Phe Pro Tyr Leu Gly Gly Val  
 100 105 110

<210> 815  
 <211> 107  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 815  
 Met Glu Ser Glu Arg Tyr Asp Glu Thr Thr Glu Lys Gln Arg Ile Arg  
 1 5 10 15  
 Arg Arg Pro His Gln Lys Pro Tyr Arg Gly Ile Arg Met Arg Lys Trp  
 20 25 30  
 Gly Lys Trp Val Ala Glu Ile Arg Glu Pro Asn Lys Arg Ser Arg Ile  
 35 40 45  
 Trp Leu Gly Ser Tyr Ala Thr Ala Val Ala Ala Arg Ala Tyr Asp  
 50 55 60  
 Thr Ala Val Phe Tyr Leu Arg Gly Pro Ser Ala Arg Leu Asn Phe Pro  
 65 70 75 80  
 Asp Leu Ile Leu His Glu Gly Gln Asp Ser Leu Gly Glu Val Ser Ala  
 85 90 95  
 Ala Ser Ile Arg Arg Arg Ala Ala Glu Val Gly  
 100 105

<210> 816  
 <211> 89  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 816  
 Met Ala Phe Thr Gly Thr Val Asp Lys Cys Lys Val Cys Asp Lys Thr  
 1 5 10 15  
 Val His Val Val Asp Met Met Thr Leu Glu Gly Ile Pro Tyr His Lys  
 20 25 30  
 Thr Cys Phe Arg Cys Ser His Cys Asn Gly Thr Leu Val Met Ser Asn  
 35 40 45  
 Tyr Ser Ser Met Asp Gly Val Leu Tyr Cys Lys Thr His Phe Glu Gln  
 50 55 60  
 Leu Phe Lys Glu Ser Gly Asp Phe Arg Lys Asn Phe His Ser Ala Lys  
 65 70 75 80  
 Ser Asp Lys Pro Asn Glu Met Thr Arg  
 85

<210> 817  
 <211> 96  
 <212> PRT  
 <213> Eucalyptus grandis

&lt;400&gt; 817

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Met Glu Ser Glu Arg Tyr Asp Glu Thr Thr Glu Gly Gln Arg Ile Lys
 1          5          10          15
Arg Arg Pro His Gln Gln Gln Gln Gln Gln Arg Arg Gln Lys
          20          25          30
Pro Tyr Arg Gly Ile Arg Met Arg Lys Trp Gly Lys Trp Val Ala Glu
          35          40          45
Ile Arg Glu Pro Asn Lys Arg Ser Arg Ile Trp Leu Gly Ser Tyr Ala
          50          55          60
Thr Pro Val Ala Ala Ala Arg Ala Tyr Asp Thr Ala Val Phe Tyr Leu
          65          70          75          80
Arg Gly Pro Ser Ala Arg Leu Asn Phe Pro Asp Leu Ile Trp Arg Glu
          85          90          95

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&lt;210&gt; 818

&lt;211&gt; 159

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 818

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Met Val Lys Arg Asp Arg Glu Asp Ala Glu Val Glu Ala Leu Ala Val
 1          5          10          15
Ala Asn Cys Leu Met Leu Leu Pro Arg Val Gly Glu Ser Ala Val Ser
          20          25          30
Asn Arg Glu Ser Arg Ser Thr Glu Arg Met Phe Ala Cys Lys Thr Cys
          35          40          45
Asn Arg Glu Phe Ser Ser Phe Gln Ala Leu Gly Gly His Arg Thr Ser
          50          55          60
His Lys Lys Gln Lys Leu Ile Pro Gly Gly Leu Phe His Leu Gly Cys
          65          70          75          80
Thr Ala Asp Ser Ser Pro Ala Lys Pro Lys Arg His Glu Cys Ser Ile
          85          90          95
Cys Gly Leu Glu Phe Pro Met Gly Gln Ala Leu Gly Gly His Met Arg
          100          105          110
Arg His Arg Ala Ala Met Ala Glu Gly Leu Ala Ala Glu Ala Ala Lys
          115          120          125
Pro Val Pro Val Leu Lys Arg Ser Asn Ser Lys Arg Val Met Cys Leu
          130          135          140
Asp Leu Asn Ser Ser Leu Met Glu Asp Asp Leu Thr Leu Arg Leu
          145          150          155

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&lt;210&gt; 819

&lt;211&gt; 241

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 819

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Glu Asp Ser Leu Asp Lys Glu Pro Pro Pro Pro Pro Pro Arg Phe
 1          5          10          15
Lys Val His Ser Phe Cys Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr
          20          25          30
His Gly Gly Phe Ser Val Leu Arg Arg His Ala Asp Glu Cys Leu Pro
          35          40          45
Gln Leu Asp Met Ser Lys Gln Pro Pro Thr Gln Glu Leu Ala Ala Lys
          50          55          60
Asp Leu His Gly Asn Glu Trp Arg Phe Arg His Ile Phe Arg Gly Gln
          65          70          75          80
Pro Arg Arg His Leu Leu Gln Ser Gly Trp Ser Val Phe Val Ser Ser
          85          90          95
Lys Arg Leu Val Ala Gly Asp Ala Phe Ile Phe Leu Arg Gly Glu Asn
          100          105          110

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Gly Glu Leu Arg Val Gly Val Arg Arg Ala Met Lys Gln Gln Gly Asn  
           115                          120          125  
 Val Ser Pro Ser Val Ile Ser Ser His Ser Met His Leu Gly Val Leu  
           130                          135          140  
 Ala Thr Ala Trp His Ala Ile Ser Thr Gly Thr Met Phe Thr Val Tyr  
 145                          150          155          160  
 Tyr Lys Pro Arg Ile Ser Pro Ala Glu Phe Ile Ile Pro Tyr Asp Gln  
                           165          170          175  
 Tyr Met Glu Ser Leu Lys Lys Asn Tyr Ser Ile Gly Met Arg Phe Lys  
                           180          185          190  
 Met Arg Phe Glu Gly Glu Glu Ala Pro Glu Gln Arg Phe Thr Gly Thr  
           195                          200          205  
 Ile Ile Gly Ile Glu Asp Ala Asp Pro Lys Gly Trp Arg Asp Thr Lys  
           210                          215          220  
 Trp Arg Ser Leu Lys Val Arg Trp Asp Glu Asn Ser Ala Ile Pro Arg  
 225                          230          235          240  
 Pro

<210> 820  
 <211> 185  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 820  
 Phe Arg Gly Val Arg Lys Arg Lys Trp Gly Arg Trp Val Ser Glu Ile  
   1                          5          10          15  
 Arg Leu Pro Asn Ser Arg Glu Arg Ile Trp Leu Gly Ser Tyr Asp Thr  
           20                          25          30  
 Pro Glu Lys Ala Ala Arg Ala Phe Asp Ala Ala Ala Phe Cys Leu Gly  
           35                          40          45  
 Arg Pro Ala Ala Lys Leu Asn Phe Pro Gly Ser Pro Pro Glu Ile Ser  
           50                          55          60  
 Gly Ala Ala Ser Leu Ser Pro Asp Glu Ile Gln Ser Ala Ala Ala Ser  
 65                          70          75          80  
 His Ala Asn Phe Gly Ala Val Ala Val Pro Ala Arg Ala Glu Leu Pro  
                           85          90          95  
 Arg Pro Gly Ser Pro Ala Pro Ser Pro Ser Leu Ser Ala Ser Glu Ala  
           100                          105          110  
 Ser Ser Val Leu Thr Thr Glu Ser Asp Leu Thr Leu Asp Leu Ser Phe  
           115                          120          125  
 Leu Asp Phe Leu Asp Asp Ser Gly Pro Val Ser Gly Glu Pro His Ile  
           130                          135          140  
 Gly Lys Phe Pro Gly Val Glu Glu Ala Pro Asp Val Phe Tyr His Met  
 145                          150          155          160  
 Gln Phe Pro Ser Val Glu Ser Ala Gly Leu Asn Leu Asp Thr Leu Leu  
                           165          170          175  
 Ala Ser Asp Ser Phe Pro Trp Arg Ile  
           180                          185

<210> 821  
 <211> 187  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 821  
 Glu Ala Asp Phe Leu Ala Lys His Ser Lys Pro Glu Ile Val Asp Met  
   1                          5          10          15  
 Leu Arg Lys His Thr Tyr Arg Asp Glu Leu Glu Gln Ser Lys Arg Ser  
           20                          25          30  
 Tyr Arg Gly Ser Ala Ala Glu Arg Ala Gly Arg Gly Gly Phe Gly Pro

```

      35      40      45
Gly Arg Thr Glu Trp Ser Ala Ala Arg Glu Gln Leu Phe Glu Lys
  50      55      60
Ala Val Thr Pro Ser Asp Val Gly Lys Leu Asn Arg Leu Val Ile Pro
  65      70      75      80
Lys Gln His Ala Glu Lys His Phe Pro Leu Pro Gly Gly Pro Ala Ala
      85      90      95
Thr Met Lys Gly Val Leu Leu Asn Phe Glu Asp Val Gly Gly Lys Val
      100      105      110
Trp Arg Phe Arg Tyr Ser Tyr Trp Asn Ser Ser Gln Ser Tyr Val Leu
      115      120      125
Thr Lys Gly Trp Ser Arg Phe Val Lys Glu Lys Ser Leu Lys Ala Gly
      130      135      140
Asp Thr Val Cys Phe Gln Arg Ser Thr Gly Pro Asp Lys Gln Leu Tyr
  145      150      155      160
Ile Asp Phe Lys Pro Arg Gly Gln Pro Pro Ala Gly Pro Ala Ala Pro
      165      170      175
Pro Pro Pro Pro Val Gln Met Val Arg Leu Phe
      180      185

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<210> 822  
 <211> 110  
 <212> PRT  
 <213> Eucalyptus grandis

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      <400> 822
Val Asn Pro Pro Thr Arg Thr Phe Val Lys Val His Lys Ser Gly Thr
  1      5      10      15
Phe Gly Arg Ser Leu Asp Ile Ser Lys Phe Ser Ser Tyr Asp Glu Leu
      20      25      30
Arg Ser Glu Leu Ala Arg Met Phe Gly Leu Glu Gly Gln Leu Glu Asp
      35      40      45
Pro Gln Arg Ser Gly Trp Gln Leu Val Phe Val Asp Arg Glu Asn Asp
      50      55      60
Ile Leu Leu Leu Gly Asp Asp Pro Trp Gln Glu Phe Val Asn Asn Val
  65      70      75      80
Trp Tyr Ile Lys Ile Leu Ser Pro His Glu Val Lys Gln Leu Gly Lys
      85      90      95
Gln Gly Ile Asn Pro Ala Asn Ser Val Pro Arg Gln Ala Leu
      100      105      110

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<210> 823  
 <211> 370  
 <212> PRT  
 <213> Eucalyptus grandis

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      <400> 823
Met Thr Arg Arg Cys Ser His Cys Cys Asn Lys Gly His Asn Ser Arg
  1      5      10      15
Thr Cys Pro Val Arg Gly Gly Gly Gly Asp Gly Gly Gly Ala Ala Ala
      20      25      30
Ala Pro Ser Ser Ser Ser Pro Ser Thr Ser Ser Ser Gly Ala Ala Ala
      35      40      45
Ala Ala Ala Ala Ser Ala Ser Gly Gly Gly Val Lys Leu Phe Gly Val
      50      55      60
Arg Leu Thr Asp Gly Ser Ile Met Lys Lys Ser Ala Ser Val Gly Cys
  65      70      75      80
Leu Ser Ala Ala His Tyr His Ser Ser Ser Ala Ala Ala Ser Pro
      85      90      95
Asn Pro Gly Ser Ser Pro Ile Asp Gly Ser Asp Gly Tyr Leu Ser Asp
      100      105      110

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Asp Pro Ala Pro Gly Ser Arg Ser Ser Asn Arg Arg Val Glu Arg Lys  
           115                          120                          125  
 Lys Gly Asn Pro Trp Thr Glu Glu His Arg Arg Phe Leu Ile Gly  
       130                          135                          140  
 Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asp Phe  
 145                          150                          155                          160  
 Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr  
                           165                          170                          175  
 Tyr Ile Arg Gln Ser Asn Ala Gly Arg Arg Lys Arg Arg Ser Ser Leu  
                           180                          185                          190  
 Phe Asp Met Ala Pro Asp Met Ala Thr Ala Asp Gln Pro Ser His Pro  
       195                          200                          205  
 Glu Glu Thr Phe Leu Pro Pro Leu Val Arg Leu Asn Asp Asp Thr Asn  
       210                          215                          220  
 Ser Thr Thr Ser Thr Ser Met Gly Leu Asp Leu Glu Arg Thr Pro Met  
 225                          230                          235                          240  
 Glu Thr Ser His Pro Glu Thr Ser Glu Gly Gly Gly Asp Val Ala Met  
                           245                          250                          255  
 Glu Ser Ile Asp Gln Val Pro Leu Val Pro Cys Tyr Phe Pro Tyr Tyr  
                           260                          265                          270  
 Leu Pro Leu Pro Phe Pro Met Trp Pro Pro Asn Met Ala Pro Pro Glu  
       275                          280                          285  
 Asp Gly Arg Val Val Glu Thr Ser His His Arg Val Leu Lys Pro Ile  
       290                          295                          300  
 Pro Val Ile Pro Lys Glu Pro Leu Asn Ile Asp Gln Ile Val Gly Met  
 305                          310                          315                          320  
 Ser Gln Leu Ser Leu Ala Glu Asn Glu Pro Ala Pro Leu Ser Leu Lys  
                           325                          330                          335  
 Phe Leu Gly Glu Thr Ser Arg Gln Ser Ala Phe Ile Lys Ala Pro Ser  
                           340                          345                          350  
 Ser Val Asn Glu Ser Asp Leu Asp Asn Cys Lys Asp Gly Ala Thr Gln  
       355                          360                          365  
 Ala Ala  
       370

<210> 824  
 <211> 160  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 824  
 Glu Leu Trp Leu Ser Phe Gly Thr Gly Glu Lys Lys Ser Ile Asn Ser  
   1                          5                          10                          15  
 Glu Leu Trp His Ala Cys Ala Gly Pro Leu Val Ser Leu Pro Pro Val  
                           20                          25                          30  
 Gly Ser Leu Val Val Tyr Phe Pro Gln Gly His Ser Glu Gln Val Ala  
       35                          40                          45  
 Ala Ser Met Gln Lys Glu Thr Cys Val Pro Ser Tyr Pro Asn Leu  
       50                          55                          60  
 Pro Ala Lys Leu Ile Cys Met Leu His Asn Val Thr Leu His Ala Asp  
 65                          70                          75                          80  
 Leu Glu Thr Asp Glu Val Tyr Ala Gln Met Thr Leu Gln Pro Val Ser  
                           85                          90                          95  
 Lys Tyr Asp Gln Glu Ala Leu Leu Ala Ser Asp Met Gly Leu Lys Gln  
                           100                          105                          110  
 Ser Arg Gln Pro Thr Glu Phe Phe Cys Lys Thr Leu Thr Ala Ser Asp  
       115                          120                          125  
 Thr Ser Thr His Gly Gly Phe Ser Val Pro Arg Arg Ala Ala Glu Lys  
       130                          135                          140  
 Ile Phe Pro Ser Leu Asp Phe Thr Met Gln Pro Pro Cys Gln Glu Leu  
       145                          150                          155                          160

<210> 825  
 <211> 129  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 825  
 Met Ala Leu Glu Ala Leu Asn Ser Pro Thr Ala Ala Ala Pro Phe Gly  
 1 5 10 15  
 His Asp Asp Ala Asp Gly His Pro Trp Ala Lys Arg Lys Arg Ser Lys  
 20 25 30  
 Arg Pro Arg Ala Asp Pro Gln Asp Gln Pro Ser Glu Glu Glu Tyr Leu  
 35 40 45  
 Ala Leu Cys Leu Ile Met Leu Ala Arg Arg Arg Arg Arg Pro Gly Ser  
 50 55 60  
 Ser Gly Arg Leu His Glu Cys Ser Ile Cys His Lys Ala Phe Pro Thr  
 65 70 75 80  
 Gly Gln Ala Leu Gly Gly His Lys Arg Cys His Tyr Asp Gly Gly Ser  
 85 90 95  
 Ser Ser Ser Ala Ala Arg Ala Ala Ser Ser Ser Glu Ala Gly Gly Pro  
 100 105 110  
 Ser His Thr Thr Val Ser His Arg Glu Pro Ile Asp Leu Asn Leu Pro  
 115 120 125  
 Ala

<210> 826  
 <211> 115  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 826  
 Arg His Leu Leu Gln Ser Gly Trp Ser Leu Phe Val Ser Ser Lys Lys  
 1 5 10 15  
 Leu Val Ala Gly Asp Ala Phe Ile Tyr Leu Arg Gly Glu Asn Gly Glu  
 20 25 30  
 Leu Arg Val Gly Val Arg Arg Ala Met Arg Gln Leu Asn Asn Val Pro  
 35 40 45  
 Ser Ser Ile Met Pro Ser His Ser Met His Ile Gly Val Leu Ala Thr  
 50 55 60  
 Ala Trp His Ala Ile Ser Thr Gly Thr Met Phe Thr Val Tyr Tyr Lys  
 65 70 75 80  
 Pro Arg Thr Ser Pro Ala Glu Phe Ile Ile Pro Phe Asp Lys His Ile  
 85 90 95  
 Glu Ser Ala Lys Phe Asp Tyr Ser Ile Gly Met Arg Phe Arg Met Thr  
 100 105 110  
 Phe Glu Trp  
 115

<210> 827  
 <211> 199  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 827  
 Ser Ser Val His Asp Ile Ser Glu Asn Gly Glu Ala Asp Glu Gln Gln  
 1 5 10 15  
 Lys His Ser Glu Gln His Glu Ser Ser Pro Ala Thr Gly Val Pro His  
 20 25 30  
 Pro Gly Val Ser Leu Pro Asn Val Gln Tyr Ala Thr Pro Pro Gln Leu  
 35 40 45

Gly Ala Gly His Ala Met Thr Pro Pro Ala Tyr Pro Tyr Pro Asp Pro  
 50 55 60  
 Tyr Tyr Arg Ser Ile Phe Ala Pro Tyr Asp Ala Gln Ser Tyr Pro Gln  
 65 70 75 80  
 Gln Pro Tyr Gly Ala Gln Pro Met Val His Leu Gln Leu Met Gly Ile  
 85 90 95  
 Gln Gln Ala Gly Val Pro Leu Pro Ser Asp Ala Val Glu Glu Pro Val  
 100 105 110  
 Phe Val Asn Ala Lys Gln Tyr His Gly Ile Leu Arg Arg Arg Gln Ser  
 115 120 125  
 Arg Ala Lys Ala Glu Leu Glu Asn Lys Ala Leu Lys Ser Arg Lys Pro  
 130 135 140  
 Tyr Leu His Glu Ser Arg His Leu His Ala Leu Arg Arg Ala Arg Gly  
 145 150 155 160  
 Cys Gly Gly Arg Phe Leu Asn Ala Lys Lys Asp Glu Asn Gln Gln Ser  
 165 170 175  
 Glu Val Ser Ser Ala Asp Lys Ser Gln Gly Asn Ile Asn Leu Asn Ser  
 180 185 190  
 Asp Lys Ser Asp Arg Ser Ser  
 195

<210> 828  
 <211> 98  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 828  
 Val Lys Asp Met Phe Gln Asp Gln Arg Glu Lys Tyr Asp Thr Phe Leu  
 1 5 10 15  
 Glu Val Met Lys Asp Phe Lys Ala Gln Arg Thr Asp Thr Thr Gly Val  
 20 25 30  
 Ile Ala Arg Val Lys Glu Leu Phe Lys Gly His Asn Lys Leu Ile Leu  
 35 40 45  
 Gly Phe Asn Thr Phe Leu Pro Lys Gly Phe Glu Ile Ser Pro Asp Glu  
 50 55 60  
 Asp Glu Thr Pro Ile Lys Lys Asn Val Glu Phe Glu Glu Ala Ile Ser  
 65 70 75 80  
 Phe Val Asn Lys Ile Lys Lys Arg Phe Gln Asn Asp Glu His Val Tyr  
 85 90 95  
 Lys Ser

<210> 829  
 <211> 136  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 829  
 Met Phe Arg Gln His Asn Leu Leu Leu Asn Phe Asn Pro Thr Asp Asp  
 1 5 10 15  
 Asp Pro Gln Asp Glu Gly Ser Pro Pro Pro Tyr Val Leu Arg Gly  
 20 25 30  
 Ala Pro Pro Pro Ala Glu Pro Ser Pro Ala Glu Lys Glu Pro Met Phe  
 35 40 45  
 Glu Lys Pro Leu Thr Pro Ser Asp Val Gly Lys Leu Asn Arg Leu Val  
 50 55 60  
 Ile Pro Lys Gln His Ala Glu Lys His Phe Pro Leu Val Gly Glu Ala  
 65 70 75 80  
 Thr Gln Gln Leu Ser Phe Glu Asp Glu Ser Gly Lys Trp Trp Arg Phe  
 85 90 95  
 Arg Tyr Ser Tyr Trp Ser Ser Ser Gln Ser Tyr Val Leu Thr Lys Gly

100 105 110  
 Trp Ser Arg Phe Val Lys Asp Lys Arg Leu Asp Ala Gly Asp Val Val  
 115 120 125  
 Leu Phe Thr Ala Thr Ala Pro Thr  
 130 135

<210> 830  
 <211> 96  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 830  
 Met Ala Gln Arg Ser Ala Pro Ala Pro Phe Leu Thr Lys Thr Tyr Gln  
 1 5 10 15  
 Leu Val Asp Asp Pro Ala Thr Asp Asp Val Ile Ser Trp Gly Glu Ser  
 20 25 30  
 Gly Arg Thr Phe Val Val Trp Lys Thr Ala Glu Phe Ala Lys Asp Leu  
 35 40 45  
 Leu Pro Ser Ser Phe Lys His Asn Asn Phe Ser Ser Phe Val Arg Gln  
 50 55 60  
 Leu Asn Thr Tyr Gly Phe Arg Lys Ile Val Pro Asp Lys Trp Glu Phe  
 65 70 75 80  
 Ala Asn Asp Arg Phe Gln Arg Gly Gln Lys Glu Leu Leu Ser Glu Ile  
 85 90 95

<210> 831  
 <211> 81  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 831  
 Arg Met Trp Arg Asp Lys Met Arg Leu Lys Arg Leu Lys Glu Gln Asn  
 1 5 10 15  
 Lys Gly Lys Glu Gly Val Asp Ile Ala Lys Gln Arg Gln Ser Gln Glu  
 20 25 30  
 Gln Ala Arg Arg Lys Lys Met Ser Arg Ala Gln Asp Gly Ile Leu Lys  
 35 40 45  
 Tyr Met Leu Lys Met Met Val Ala His Trp Lys Arg Gly Leu Val Ala  
 50 55 60  
 Pro Ala Gly Phe Ala Glu Gly Ser Arg Ser Pro Ala Leu Gln Glu Thr  
 65 70 75 80  
 Ser

<210> 832  
 <211> 94  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 832  
 Met Asp Gln Trp Arg Thr Asp Leu Gly Ala Ser Thr Ser Val His Pro  
 1 5 10 15  
 Gln Gln His Gln His Gln His Gln His His Pro Ser Ser Arg Leu His  
 20 25 30  
 Ala Ser His Asp Glu Pro Arg Gln Arg Glu Glu Ala Asp Val Arg Asp  
 35 40 45  
 Pro Val Ala Ala Arg Lys Val Gln Lys Ala Asp Arg Glu Lys Leu Arg  
 50 55 60  
 Arg Asp Arg Leu Asn Glu His Phe Leu Glu Leu Gly Ser Thr Leu Asp  
 65 70 75 80  
 Pro Asp Arg Pro Lys Asn Asp Lys Ala Thr Ile Leu Thr Asp

85

90

<210> 833  
 <211> 245  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 833  
 Lys Lys Thr Ile Ser Ser Glu His Lys Arg Arg Arg Val Val Val Val  
 1 5 10 15  
 Val Leu Leu Leu Leu Val Pro Ser Thr Ser Phe Phe Pro Pro Pro Ser  
 20 25 30  
 Ser Ser Leu Pro Pro Ser Leu Ser Leu Asn Leu Pro Asn Pro Ser Arg  
 35 40 45  
 Arg Arg Arg Arg Glu Arg Glu Arg Glu Arg Glu Arg Arg Glu Asp His  
 50 55 60  
 Arg Phe Arg Pro Ser Arg Ala Arg Ala Val Met Arg Arg Gly Arg Cys  
 65 70 75 80  
 Ala Ala Ala Ala Ala Lys Arg Glu Ala Ala Glu Ile Ala Pro Pro Pro  
 85 90 95  
 Val Pro His Ala Ala Ala Ala Ala Ala Ala Glu Pro Arg Tyr Arg Gly  
 100 105 110  
 Val Arg Arg Lys Ser Leu Gly Arg Tyr Thr Ala Glu Ile Arg Asp Pro  
 115 120 125  
 Gly Thr Lys Lys Leu Val Arg Leu Gly Thr Phe Gly Ser Pro Glu Glu  
 130 135 140  
 Ala Ala Arg Ala Phe Asp Ala Lys Ala Val Ala Phe Arg Gly Val Lys  
 145 150 155 160  
 Ala Arg Thr Asn Phe Pro Val Ala Pro Ser Ser Phe Pro Pro Ala Ala  
 165 170 175  
 Ser Arg Asp Leu Arg Ala Pro Leu Ile Glu Ser Arg Lys Phe Gly Arg  
 180 185 190  
 Arg Gly Ala Arg Asp Leu Arg Gly Asp His His Asp Val Ser Pro Gln  
 195 200 205  
 Arg Pro Thr Ser Ser Ser Leu Ser Ser Thr Val Val Ser Ser Ser Gly  
 210 215 220  
 Pro Arg Pro Ser Pro Ser Pro Glu Thr Ala Lys Arg Arg Thr Arg Thr  
 225 230 235 240  
 Pro Pro Arg His Arg  
 245

<210> 834  
 <211> 180  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 834  
 Tyr Asn Ser Asn Ser Asp Pro Ile Arg Glu Glu Phe Met Lys Ala Leu  
 1 5 10 15  
 Glu Pro Phe Met Lys Ser Val Ser Pro Val Ser Ser Pro Leu Ser Ser  
 20 25 30  
 Leu Ser Ser Cys Asp Ser Val Phe Pro Lys Gln Gln Pro Asn Leu Asn  
 35 40 45  
 Pro Asp Leu Cys Ser Ser Trp Ile Val Asn Pro Met Gly Leu Glu Gln  
 50 55 60  
 Ser Gly Ser Ile Gly Leu Asn Arg Leu Ser His Ser Gln Ile Gln His  
 65 70 75 80  
 Ile Gln Asp Glu Met Leu Leu Arg Arg Gln Asn Gln Glu Leu Trp Leu  
 85 90 95  
 Ala Ser Ala Val Lys Ser Pro Leu Gln His Glu Lys Phe Asp Gln Cys  
 100 105 110

Arg Tyr Gln Asn His His Gly Ser Pro His Leu Leu Arg Pro Lys Ala  
 115 120 125  
 Leu Ser Met Lys Arg Val Gly Val Pro Pro Lys Pro Asn Lys Leu Tyr  
 130 135 140  
 Arg Gly Val Arg Gln Arg His Trp Gly Lys Trp Val Ala Glu Ile Arg  
 145 150 155 160  
 Leu Pro Lys Asn Arg Thr Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala  
 165 170 175  
 Glu Glu Ala Ala  
 180

<210> 835  
 <211> 234  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 835  
 Arg Glu Arg Glu Arg Gly Arg Gly Val Met Asp Leu Phe Phe His Glu  
 1 5 10 15  
 Glu Val Gln Ser Asp Ile Phe Trp Cys Asp Gln Leu Val Glu Pro Pro  
 20 25 30  
 Pro Pro Pro Pro Pro Pro Leu Pro Pro Ala Asn Pro Ser Ala Phe Ser  
 35 40 45  
 Pro Tyr Thr Asn Arg Leu Pro Ser Gln Asp Arg Gly Phe Met Pro Asn  
 50 55 60  
 Pro Gly Asn Asn Met Asn Lys Arg Val Met Glu Phe Leu Arg Arg Ser  
 65 70 75 80  
 Trp Ala Glu Pro Ser Gln Ile Gln Glu Phe Asp Arg Glu Arg Gly Phe  
 85 90 95  
 Arg His Met Leu Ser Glu Arg Met Arg Arg Glu Lys Gln Lys Arg Ser  
 100 105 110  
 Tyr Ser Ala Leu Leu Ser Glu Leu Pro His Gly Thr Lys Asn Asp Lys  
 115 120 125  
 Asn Ser Ile Val Gln Thr Ala Cys Met Arg Ile Lys Glu Leu Val Lys  
 130 135 140  
 Tyr Lys Gln Glu Leu Glu Arg Gln Asn Gly Glu Leu Lys Ser Gly Leu  
 145 150 155 160  
 Asn Glu Lys Ser Gly Gly Asp Lys Ala Glu Gly Thr Lys Ile Arg Val  
 165 170 175  
 Lys Ile Ala Asn Pro Thr Ser Gly Ile Asp Ser Met Leu Glu Val Leu  
 180 185 190  
 Lys Cys Leu Asp Asn Met Gly Leu Lys Ala Thr Ala Ile Gln Thr Gln  
 195 200 205  
 Cys Ser Ala Asp Gln Leu Phe Ala Val Ile Glu Val Glu Asn Glu Val  
 210 215 220  
 Cys Ala Gln Gln Ser Asp Ala Asn Val His  
 225 230

<210> 836  
 <211> 59  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 836  
 His Gly Ala Thr Trp Arg Arg Lys Glu Ala Asn Gly Gly Ser Glu Ala  
 1 5 10 15  
 Ser Asp Ala Val Leu Pro Arg Ala His His Arg His Arg Tyr Lys Gly  
 20 25 30  
 Val Arg Met Arg Lys Trp Gly Lys Trp Val Ala Glu Ile Arg Gln Pro  
 35 40 45  
 Asn Ser Arg Asp Arg Ile Trp Leu Gly Ser Tyr

50

55

<210> 837  
 <211> 38  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 837  
 Glu Leu Leu Gln Ile Gln Arg Lys Arg Lys Arg Met Glu Ser Asn Arg  
 1 5 10 15  
 Glu Ser Ala Lys Arg Ser Arg Leu Arg Lys Gln Gln His Leu Asp Glu  
 20 25 30  
 Leu Thr Thr Glu Val Gly  
 35

<210> 838  
 <211> 167  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 838  
 Met Ala Pro Arg Glu Lys Pro Ser Val Ala Ala Ile Pro Asn Pro Asn  
 1 5 10 15  
 Gly Ala Lys Glu Ile Arg Phe Arg Gly Val Arg Lys Arg Pro Trp Gly  
 20 25 30  
 Arg Tyr Ala Ala Glu Ile Arg Asp Pro Gly Lys Lys Thr Arg Val Trp  
 35 40 45  
 Leu Gly Thr Phe Asp Thr Ala Glu Glu Ala Ala Arg Ala Tyr Asp Thr  
 50 55 60  
 Ala Ala Arg Glu Phe Arg Gly Ala Lys Ala Lys Thr Asn Phe Pro Thr  
 65 70 75 80  
 Ser Ala Glu Leu Ile Ser Ser Ser Arg Ser Pro Ser Gln Ser Ser Ser  
 85 90 95  
 Leu Asp Glu Pro Ser Pro Pro Pro Pro Ala Gly Ala Val Gln Ala Ala  
 100 105 110  
 Ala Leu Gly Pro Pro Leu Asp Leu Ser Leu Gly Arg His Pro Val Ala  
 115 120 125  
 Ala Ala Ala Ala Gly Pro Gly Pro Tyr Phe Pro Gly Ala Ala Ala Met  
 130 135 140  
 Cys Phe Pro Val Met Pro Pro Pro Pro Arg Pro Val Phe Phe Phe Asp  
 145 150 155 160  
 Pro Phe Gly Arg Met Glu His  
 165

<210> 839  
 <211> 84  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 839  
 Cys Leu Gly Leu Ser Ser Val Ala Ala Asn Ala Glu Lys Leu Ala Ala  
 1 5 10 15  
 Leu Gln Asn Glu Tyr His Phe Ala Lys Ala Arg Ile Asp Glu Asp His  
 20 25 30  
 Glu Lys Ala Gln Arg Leu Glu Lys Lys Val Lys Thr Leu Thr Phe Gly  
 35 40 45  
 Tyr Gln Met Arg Glu Lys Thr Leu Arg Asp Gln Ile Glu Ser Thr Phe  
 50 55 60  
 Lys Gln Leu Asp Thr Ala Gly Thr Glu Leu Glu Cys Phe Pro Ala Leu  
 65 70 75 80  
 Gln Lys Gln Glu

<210> 840  
 <211> 157  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 840  
 Pro Ser Ser Pro Val Ser Thr Lys Thr His Pro Pro Tyr Leu Cys Thr  
 1 5 10 15  
 Arg Pro Thr Arg Leu Ser Gln Gly Leu Arg Tyr Arg Arg Leu Ala Ala  
 20 25 30  
 Lys His Glu Glu Lys Pro Ser Ala Val Leu Asp Lys Ser Gln Asp Pro  
 35 40 45  
 Thr Asp Ser Ala Lys Pro Ser Lys Lys Pro Arg His Arg His Ser Pro  
 50 55 60  
 Thr Gln Leu Ala Ala Leu Asn Glu Leu Phe Glu Lys Ser Glu His Pro  
 65 70 75 80  
 Thr Leu Glu Glu Arg Gly Gln Leu Ala Glu Lys Leu Gly Met Glu Thr  
 85 90 95  
 Lys Thr Val Asn Ala Trp Phe Gln Asn Lys Arg Ala Ser Thr Lys Lys  
 100 105 110  
 Arg Asn Lys Gly Gly Thr Ser Glu Pro His Pro Ala Thr Ser Gln Asn  
 115 120 125  
 Asp Leu Ser Glu Asp Ala Leu Lys Thr Pro Ser Ala Leu Pro Ser Ile  
 130 135 140  
 Ala Asn Leu Leu Asn Asp Ala Pro Ser Ser Ala Ser Pro  
 145 150 155

<210> 841  
 <211> 86  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 841  
 Tyr Leu His Asn Pro Met Arg Lys Arg Gln Arg Thr Leu Asp Met His  
 1 5 10 15  
 Ala Gly Ala Pro Gly Pro Asn Asp Ala Ile Asp Ala Asn Ser Val Gly  
 20 25 30  
 Asp Asn Ala Phe Ile Ala Asp His Asp Ala Ile Asp Ser Ala Gly Asp  
 35 40 45  
 Asp Asp Asp Asp Glu Asp Lys Pro Lys Thr Gly Gln Lys Gln Gly Arg  
 50 55 60  
 Arg Lys Ile Lys Ile Glu Phe Ile Gln Asp Lys Ser Arg Arg His Ile  
 65 70 75 80  
 Thr Phe Ser Lys Arg Lys  
 85

<210> 842  
 <211> 201  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 842  
 Asp His Val Pro Ser Ser Ser Ala Leu Asp Ser Arg Ser Ser Ser Asn  
 1 5 10 15  
 Arg Thr Ser Gly Val Thr Leu Ala Glu Val Leu Pro Thr Pro Gly Gln  
 20 25 30  
 Ser Lys Ser Ser Ala Asp Ser Gly Phe Cys Val Ser His Leu Gly Gly  
 35 40 45  
 Val Pro Asp Ser Gln Ser Ser Ser Tyr Ala Ala Glu His Val Asn Thr



50					55					60					
His	Gln	Thr	Gln	Glu	Ile	His	Leu	Pro	Val	Pro	Gln	Asp	Asn	Ala	Asp
65					70					75					80
Leu	Pro	Asp	Ala	Asn	Phe	Leu	Val	Ser	Glu	Thr	Ala	Ser	Pro	Asp	Tyr
				85					90					95	
Leu	Glu	Thr	Leu	Ser	Ala	Ala	Leu	Asp	Gly	Thr	Met	Asp	Val	Glu	Ser
			100					105					110		
Asp	Ala	Phe	Ser	Ser	Glu	Arg	Asp	Ala	Gly	Ile	Met	Leu	Asp	Asp	Val
		115					120					125			
Thr	Asn	Leu	Pro	Ala	Ile	Ser	Asp	Val	Phe	Trp	Glu	Gln	Phe	Leu	Ala
	130					135					140				
Ala	Ser	Pro	Leu	Thr	Ala	Asp	Thr	Glu	Glu	Ile	Ser	Ser	Thr	Ser	His
145					150					155					160
Glu	Thr	Gly	Ile	Thr	Asn	Asp	Gln	Glu	Ser	His	Thr	Lys	Val	Glu	Asn
			165						170					175	
Gly	Phe	Glu	Lys	Ala	His	Tyr	Met	Asp	His	Leu	Thr	Lys	Gln	Met	Gly
			180					185					190		
His	Leu	Thr	Ser	Asn	Asn	Gly	Thr	Gly							
		195					200								

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<210> 843
<211> 187
<212> PRT
<213> Eucalyptus grandis
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<400> 843															
Phe 1	Ser	Thr	Pro	Pro 5	Pro	His	Pro	Glu	Ser 10	Asn	Pro	Ile	Pro	Ser 15	Leu
Pro	Pro	Ser	Leu 20	Phe	Phe	Pro	Gln	Ser 25	Phe	Val	Ala	Phe	Ser 30	Ser	Thr
His	Ala	Pro	Gln	Ser	Pro	Thr	Pro	Ser 40	Ile	Lys	Leu	Lys 45	His	His	His
Leu	Lys 50	Lys	Lys	Glu	Gly	Lys 55	Lys	Glu	Arg	Arg	Thr 60	Gly	Asp	Pro	Thr
Glu 65	Gly	Arg	Ala	Arg	Thr	Arg	His	Gly	Thr	Ile	Pro	Leu	Leu	Arg	Glu 80
Gly	Ala	His	Gln	Gln	Gly	Arg	Val	Asp	Gln	Gly	Arg	Gly	Pro	Ala	Pro
85															
His	Arg	Leu	His	Pro	Pro	Pro	Arg	Arg	Arg	Leu	Leu	Ala	Leu	Pro	Pro
100															
Gln	Ile	Cys	Arg	Ala	Ser	Gln	Val	Arg	Gln	Glu	Leu	Gln	Ala	Gln	Val
115															
Asp	Lys	Leu	Pro	Pro	Pro	Arg	Pro	Gln	Arg	Gly	Asn	Phe	Thr	Glu	Glu
130															
Glu	Asp	Glu	Leu	Ile	Ile	Lys	Leu	His	Ser	Leu	Leu	Gly	Asn	Lys	Trp
145															
Ser	Leu	Ile	Ala	Gly	Arg	Leu	Pro	Gly	Arg	Thr	Asp	Asn	Glu	Ile	Lys
165															
Asn	Tyr	Trp	Asn	Thr	His	Ile	Lys	Arg	Lys	Ala					
180															
185															

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<210> 844
<211> 112
<212> PRT
<213> Eucalyptus grandis
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      <400> 844
Met Glu Met Lys Gly Gly Val Val Pro Lys Glu Glu Glu Ala Ser Ser
 1      5      10
Asp Val Gly Gln Pro Pro Pro Pro Pro Pro Pro Pro Gln Pro Met
      20      25      30

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Glu Gly Leu Gly Glu Ala Glu Ala Ala Pro Phe Leu Thr Lys Thr Phe  
                   35                                  40                                  45  
 Glu Ile Val Glu Asp Pro Ala Thr Asp Pro Ile Val Ser Trp Ser Glu  
           50                                  55                                  60  
 Gly Arg Asn Ser Phe Ile Val Trp Asp Ala His Gln Phe Ala Val Thr  
 65                                  70                                  75                                  80  
 Leu Leu Pro Lys His Phe Lys His Gly Asn Phe Ser Ser Phe Ile Arg  
                                   85                                  90                                  95  
 Gln Leu Asn Thr Tyr Gly Val Phe Asp Glu Tyr Asp Thr Ala Ser Phe  
                                   100                                  105                                  110

<210> 845  
 <211> 76  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 845  
 Met Thr Gly Asn Phe Gly Trp Gly Ser Asn Ser Met Glu Glu Ala Trp  
 1                  5                                  10                                  15  
 Arg Lys Gly Pro Trp Thr Ala Glu Glu Asp Lys Leu Leu Ile Glu Tyr  
           20                                  25                                  30  
 Val Lys Leu His Gly Glu Gly Arg Trp Asn Ser Val Ala Arg Leu Thr  
           35                                  40                                  45  
 Gly Leu Lys Arg Asn Gly Lys Ser Cys Arg Leu Arg Trp Val Asn Tyr  
 50                                  55                                  60  
 Leu Arg Pro Asp Leu Lys Arg Gly Gln Ile Thr Pro  
 65                                  70                                  75

<210> 846  
 <211> 142  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 846  
 Met Asn Ser Asn Ala Ser Ser Asn Pro Gln Ser Met Ala Thr Ser Thr  
 1                  5                                  10                                  15  
 Thr Ser Ala Thr Thr Pro Ala Ala Gly Gly Asp Gly Gly Lys Lys Val  
           20                                  25                                  30  
 Arg Lys Pro Tyr Thr Ile Thr Lys Ser Arg Glu Ser Trp Thr Glu Glu  
           35                                  40                                  45  
 Glu His Asp Lys Phe Leu Glu Ala Leu Gln Leu Phe Asp Arg Asp Trp  
 50                                  55                                  60  
 Lys Lys Ile Glu Asp Phe Val Gly Ser Lys Thr Val Ile Gln Ile Arg  
 65                                  70                                  75                                  80  
 Ser His Ala Gln Lys Tyr Phe Leu Lys Val Gln Lys Asn Gly Ala Val  
                                   85                                  90                                  95  
 Ala His Val Pro Pro Pro Arg Pro Lys Arg Lys Ala Ala His Pro Tyr  
                                   100                                  105                                  110  
 Pro Gln Lys Ala Ser Lys Asn Val Leu Val Pro Leu Gln Ala Ser Met  
           115                                  120                                  125  
 Ala Gln Pro Ser Ser Thr Asn Pro Ala Phe Thr Ile Thr Pro  
           130                                  135                                  140

<210> 847  
 <211> 84  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 847  
 Met Lys Met Ala Glu Arg Ser Asn Ser Ser Asp Pro Glu Thr Ser Pro  
 1                  5                                  10                                  15

Ser Asn Ser Pro Ser Thr Ser Ser Ser Ser Ser Tyr Ser Pro Asp  
                   20                  25                  30  
 Pro Arg Arg Arg Ala Gly Ser Pro Ala Ala Ala Arg Asp Pro Leu Arg  
                   35                  40                  45  
 Ser Ser Lys Arg Ser Lys His Pro Val Tyr Arg Gly Val Arg Met Arg  
                   50                  55                  60  
 Asn Trp Gly Lys Trp Val Ser Glu Ile Arg Glu Pro Arg Lys Lys Ser  
                   65                  70                  75                  80  
 Arg Ile Trp Leu

<210> 848  
 <211> 60  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 848  
 Lys Trp Arg Ser Arg Phe Arg Met Ala Gly Phe Gln Gln Phe Pro Leu  
   1                  5                  10                  15  
 Ser Ser Ala Val Thr Asp Ala Val Arg Asn Leu Leu Arg Glu Tyr Asn  
                   20                  25                  30  
 Glu Asn Tyr Arg Ile Glu Glu Lys Asp Gly Ala Leu Tyr Leu Trp Trp  
                   35                  40                  45  
 Arg Asn Arg Ala Met Ala Thr Ser Ser Ala Trp Trp  
                   50                  55                  60

<210> 849  
 <211> 90  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 849  
 Gly Val Gly Phe Pro Asp Pro Gly Pro Asp Asn Gly Gln Val Leu Asp  
   1                  5                  10                  15  
 Ala Arg Asp Pro Leu Ala Glu Lys Lys Leu Glu Leu Ala Thr Cys Gln  
                   20                  25                  30  
 Arg Arg Val Glu Glu Glu Met Leu Lys His Ser Lys Ala Val Glu Val  
                   35                  40                  45  
 Thr Arg Thr Ser Thr Leu Asn Asn Leu Gln Thr Gly Leu Pro Gly Val  
                   50                  55                  60  
 Phe Gln Ala Leu Ala Ser Phe Ser Ser Leu Phe Met Glu Val Leu Asp  
                   65                  70                  75                  80  
 Thr Val Cys Thr Arg Ser Tyr Ala Ile Lys  
                                   85                                  90

<210> 850  
 <211> 52  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 850  
 Met Ala Ala Pro Pro Ala Glu Gln Ser Gly Ser Ala Ser Gly Gly Glu  
   1                  5                  10                  15  
 Ser Gln Arg Ser Val Pro Thr Pro Phe Leu Thr Lys Thr Tyr Gln Leu  
                   20                  25                  30  
 Val Asp Asp Pro Ala Ile Asp Ala Val Ile Ser Trp Asn Gly Asp Gly  
                   35                  40                  45  
 Ser Ser Phe Ile  
                   50

<210> 851

<211> 52  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 851  
 Met Asp Pro Met Asp Ile Val Gly Lys Ser Lys Glu Asp Ala Ser Leu  
 1 5 10 15  
 Pro Lys Ala Thr Met Thr Lys Ile Ile Lys Glu Met Leu Pro Pro Asp  
 20 25 30  
 Val Arg Val Ala Arg Asp Ala Gln Asp Leu Leu Ile Glu Cys Cys Val  
 35 40 45  
 Glu Phe Ile Asn  
 50

<210> 852  
 <211> 121  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 852  
 Met Asn Ser Pro Leu Ala Gln Leu Val Asn Pro Arg Arg Met His Thr  
 1 5 10 15  
 Tyr Glu Pro Phe Asp Gln Phe Pro Met Trp Gly Asp Thr Phe Lys Ala  
 20 25 30  
 Asp Lys Val Lys Asn Leu Glu Ala Ser Ser Ser Val Ile Val His Ala  
 35 40 45  
 Val Asp Asp Gly Leu Asp Lys Lys Phe Glu Tyr Val Ser His Glu Ser  
 50 55 60  
 Ala Glu Asn Ser Ser Ser Arg Ser Asp Gln Glu Ala Asn Arg Pro Asp  
 65 70 75 80  
 Lys Val Gln Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser  
 85 90 95  
 Arg Leu Arg Lys Lys Lys Tyr Val Gln Gln Leu Glu Ser Ser Arg Leu  
 100 105 110  
 Lys Leu Ala Gln Leu Glu Leu Glu Leu  
 115 120

<210> 853  
 <211> 293  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 853  
 Phe Val Tyr Gly Ile Ile Pro Glu Lys Gly Lys Pro Val Ser Gly Ala  
 1 5 10 15  
 Ser Asp Asn Leu Arg Ala Trp Trp Lys Glu Lys Val Arg Phe Asp Arg  
 20 25 30  
 Asn Gly Pro Ala Ala Ile Ala Lys Tyr Arg Ala Asp His Ser Ile Pro  
 35 40 45  
 Gly Asn Gly Glu Asp Ala Ala Thr Ile Gly Pro Ile Pro His Thr Leu  
 50 55 60  
 Gln Glu Leu Gln Asp Thr Thr Leu Gly Ser Leu Leu Ser Ala Leu Met  
 65 70 75 80  
 Gln His Cys Asn Pro Pro Gln Arg Arg Phe Pro Leu Glu Lys Gly Val  
 85 90 95  
 Ala Pro Pro Trp Trp Pro Thr Gly Glu Glu Trp Trp Pro Gln Leu  
 100 105 110  
 Gly Leu Pro Ala Asp Gln Gly Pro Pro Pro Tyr Lys Lys Pro His Asp  
 115 120 125  
 Leu Lys Lys Ala Trp Lys Val Ser Val Leu Thr Ala Val Ile Lys His  
 130 135 140

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Met Ser Pro Asp Ile Ser Lys Ile Arg Lys Leu Val Arg Gln Ser Lys
145                150                155                160
Cys Leu Gln Asp Lys Met Thr Ala Lys Glu Ser Ala Thr Trp Leu Ala
                165                170                175
Ile Ile Asn Gln Glu Glu Ala Leu Ser Arg Lys Leu Tyr Pro Asn Ser
                180                185                190
Phe Pro Pro Val Cys Ser Asp Ser Gly Phe Gly Ser Tyr Val Ile Ser
                195                200                205
Asp Ala Ser Asp Tyr Asp Val Glu Gly Ala Asp Asp Glu Pro Lys Phe
                210                215                220
Glu Ala Glu Glu Cys Lys Pro Phe Asp Pro Ser Ala Phe Gly Ile Gly
225                230                235                240
Pro Arg Val Ser Thr Gly Glu Leu Leu Ile His Pro Leu Val Ser Gln
                245                250                255
Ile Lys Gly Glu Val Asn Glu Thr Lys Thr Asn Ser Arg Leu Val Ser
                260                265                270
Lys Arg Asn Gln Pro Ser Asp Glu Pro Lys Ala Lys Met Asp Gln Lys
                275                280                285
Ile Tyr Thr Cys Glu
290

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<210> 854
<211> 150
<212> PRT
<213> Eucalyptus grandis

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<400> 854
Ser Thr Ser Ser Gln Arg Ala Asp Lys Ser Leu Ile Met Glu His Glu
1      5      10      15
Phe Ser Ser Ala Lys Ile Lys Ala Leu Leu Glu Ile Leu Gln Ser Gln
20     25     30
Cys Arg Gly Glu Ser Ala Asn Ala Glu Leu His Gly Pro Met Gly Cys
35     40     45
Asp Asp Glu Ser Leu Phe Glu Asn Thr Gly Thr Gly Asp Ser Thr Tyr
50     55     60
Arg Val Lys Ala Val Lys His Thr Thr Val Tyr Ser Ser Ser Pro Pro
65     70     75     80
Glu Gly Pro Ile Lys Ala Ile Val Phe Ser Gln Trp Thr Ser Met Leu
85     90     95
Asn Leu Val Glu Gln Asn Leu Ile His Phe Gly Ile Asn Tyr Arg Arg
100    105    110
Leu Asp Gly Thr Met Thr Leu Ser Ala Arg Asp Lys Ala Val Lys Asp
115    120    125
Phe Asn Thr Asp Pro Glu Ile Val Val Met Leu Met Ser Leu Lys Ala
130    135    140
Gly Asn Leu Gly Leu Asn
145    150

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<210> 855
<211> 92
<212> PRT
<213> Eucalyptus grandis

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<400> 855
Ser Glu Phe Gly Gly Glu Leu Met Asn Pro Arg Ser Asn Trp Leu Ile
1      5      10      15
Val Tyr Asn Asp Asp Glu Gly Asp Met Met Leu Val Gly Asp Asp Pro
20     25     30
Trp Gln Glu Phe Cys Gly Ile Val Arg Lys Ile Phe Ile Tyr Thr Arg
35     40     45
Glu Glu Val Gln Lys Met Lys Pro Gly Thr Ile Ser Ala Lys Asp Glu

```

50                      55                      60  
 Asp Asn Leu Met Val Asp Glu Gly Val Phe Ser Lys Lys Met Thr Ser  
 65                      70                      75                      80  
 Asp Thr Leu Pro Ser Ala Ser Asp Pro Lys Asn Cys  
                          85                      90

<210> 856  
 <211> 74  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 856  
 Ile Glu Ala Leu Lys Lys Arg Leu Asp Asp Val Asn Ala Lys Tyr Ala  
 1                      5                      10                      15  
 Val Ser Val Glu Phe Thr Lys Ala Met Ala Leu Asn His Leu Lys Asn  
                          20                      25                      30  
 Gly Leu Pro Arg Val Phe Lys Ala Leu Met Glu Phe Ser Gly Ala Cys  
                          35                      40                      45  
 Thr Lys Val Phe Glu Ala Leu Asn Asn Pro Arg Glu Gln Val Gly Ser  
                          50                      55                      60  
 Arg Glu Asn Glu Pro Arg Val Leu Pro Ala  
 65                      70

<210> 857  
 <211> 125  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 857  
 Gln Ile Leu Pro Pro Asn Ala Lys Ile Ser Lys Glu Ala Lys Glu Thr  
 1                      5                      10                      15  
 Met Gln Glu Cys Val Ser Glu Phe Ile Ser Phe Val Thr Gly Glu Ala  
                          20                      25                      30  
 Ser Asp Lys Cys His Lys Glu Lys Arg Lys Thr Val Asn Gly Asp Asp  
                          35                      40                      45  
 Ile Val Trp Ala Leu Gly Ser Leu Gly Phe Asp Asp Tyr Ala Glu Pro  
                          50                      55                      60  
 Leu Lys Arg Tyr Leu Asn Arg Tyr Arg Glu Val Glu Gly Glu Arg Ala  
 65                      70                      75                      80  
 Ser Gln Asn Lys Val Thr Gly Gly Glu Ser Arg Asn Glu Lys Asn Leu  
                          85                      90                      95  
 Tyr Gly Asp Glu Ser Pro Glu Lys Gln Leu Gly Ala Ala Ser Ser Ser  
                          100                      105                      110  
 Pro Leu Lys Phe Phe Asp Val Ala Asp Arg Ser Thr Asn  
                          115                      120                      125

<210> 858  
 <211> 113  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 858  
 Val Asn Ser Val Phe Glu Leu His Lys Leu Leu Ala Arg Pro Gly Ala  
 1                      5                      10                      15  
 Ile Glu Lys Val Leu Gly Val Val Arg Gln Val Arg Pro Ala Ile Val  
                          20                      25                      30  
 Thr Val Val Glu Gln Glu Ala Asn His Asn Gly Pro Val Phe Val Asp  
                          35                      40                      45  
 Arg Phe Asn Glu Ser Leu His Tyr Tyr Ser Thr Leu Phe Asp Ser Leu  
                          50                      55                      60  
 Glu Gly Cys Ala Ser Thr Gln Asp Lys Ala Met Ser Glu Val Tyr Leu

65						70						75						80
Gly	Lys	Gln	Ile	Cys	Asn	Val	Val	Ala	Cys	Glu	Gly	Ala	Asp	Arg	Val			
				85					90					95				
Glu	Arg	His	Glu	Thr	Leu	Ala	Gln	Trp	Arg	Val	Arg	Leu	Gly	Gly	Ala			
			100					105					110					
Gly																		

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<210> 859
<211> 114
<212> PRT
<213> Eucalyptus grandis
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[illegible]

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<210> 860
<211> 181
<212> PRT
<213> Eucalyptus grandis
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[illegible]

<210> 861  
 <211> 58  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 861  
 Met Ala Arg Ser Ser Cys Asn Gln Lys Leu Arg Lys Gly Leu Trp Ser  
 1 5 10 15  
 Pro Glu Glu Asp Glu Lys Leu Phe Asn Tyr Ile Ser Arg His Gly Leu  
 20 25 30  
 Gly Cys Trp Ser Ser Val Pro Lys Leu Ala Gly Leu Gln Arg Cys Gly  
 35 40 45  
 Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr  
 50 55

<210> 862  
 <211> 86  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 862  
 Met Ala Ser Gly Met Glu Asn Arg Gly Glu Ile Pro Ala Asn Leu Lys  
 1 5 10 15  
 Lys Gln Leu Ala Leu Ala Val Arg Lys Ile Gln Trp Ser Tyr Gly Ile  
 20 25 30  
 Phe Trp Ser Ile Ser Thr Arg Gln Pro Gly Val Leu Glu Trp Gly Asp  
 35 40 45  
 Gly Tyr Tyr Asn Gly Asp Ile Lys Thr Arg Lys Thr Ile Gln Ala Val  
 50 55 60  
 Glu Leu Asn Thr Asp Gln Ile Gly Met Gln Arg Ser Glu Gln Leu Arg  
 65 70 75 80  
 Glu Leu Tyr Glu Ser Leu  
 85

<210> 863  
 <211> 182  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 863  
 Asn Ile Gln Arg Asn Glu Tyr His Asn Leu Phe Asn Phe Ile Ser Gly  
 1 5 10 15  
 Lys Gly Leu Lys Ile Met Asn Leu Gly Glu Gln Gly Ala Asp Gly Val  
 20 25 30  
 Pro Gly Val Leu Asp Val Asp Asp Asp Ala Val Asp Pro His Leu  
 35 40 45  
 Glu Arg Ile Arg Ile Glu Ala Gly Val Asp Glu Ser Asp Glu Glu Asp  
 50 55 60  
 Glu Asp Phe Val Ile Asp Lys Asp Asp Gly Gly Ser Pro Thr Asp Asp  
 65 70 75 80  
 Ser Gly Asp Asp Glu Ser Asp Val Ser Glu Ser Gly Asp Glu Lys Glu  
 85 90 95  
 Lys Glu Lys Tyr Gly Lys Lys Glu Ser Arg Lys Glu Val Lys Ala Ser  
 100 105 110  
 Ser Ser Lys Lys Lys Ala Lys Ala Gly Asp Glu Glu Gly Ser Lys Lys  
 115 120 125  
 Lys Lys Gln Lys Lys Lys Asp Pro Asn Ala Pro Lys Lys Ala Met Ser  
 130 135 140  
 Gly Tyr Asn Phe Phe Leu Gln Thr Glu Ser Glu Lys Met Lys Arg Thr  
 145 150 155 160



Asn Pro Gly Leu Ser Phe Gly Asp Val Ser Arg Glu Ile Ala Asp Lys  
                           165                          170                          175  
 Trp Arg Gly Leu Ser Ala  
                           180

<210> 864  
 <211> 55  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 864  
 Met Ser Phe Thr Gly Thr Gln Val Lys Cys Lys Ala Cys Glu Lys Thr  
   1                          5                          10                          15  
 Val Tyr Pro Val Glu Gln Leu Ser Ala Asp Gly Val Ala Tyr His Lys  
                           20                          25                          30  
 Tyr Cys Phe Lys Cys Ser His Cys Lys Gly Thr Leu Lys Leu Ser Ser  
                           35                          40                          45  
 Tyr Ser Ser Met Glu Gly Val  
   50                          55

<210> 865  
 <211> 151  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 865  
 Asp Lys Ser Ser Ser Pro Val Pro Pro Gln Asp Gln Thr Gly Val His  
   1                          5                          10                          15  
 Val Tyr His Pro Asp Trp Ala Ala Met His Ala Tyr Tyr Gly Pro Arg  
                           20                          25                          30  
 Val Ala Leu Pro Pro Tyr Tyr Asn Ser Ala Val Ser Ser Gly His Gly  
                           35                          40                          45  
 Pro His Pro Tyr Met Trp Gly Pro Pro Gln Pro Met Met Pro Pro Tyr  
   50                          55                          60  
 Gly Pro Pro Tyr Ala Ala Ile Tyr Ser His Gly Gly Val Tyr Gly His  
   65                          70                          75                          80  
 Pro Ala Ile Pro Leu Thr Pro Thr Pro Leu Ala Ala Glu Thr Pro Lys  
                           85                          90                          95  
 Lys Ser Ser Ala Asn Ser Asp Asn Gly Leu Val Lys Lys Leu Lys Ser  
                           100                          105                          110  
 Phe Glu Gly Leu Ala Met Ser Ile Gly Ser Gly Gly Asp Ala Asp Ser  
                           115                          120                          125  
 Ala Asp Asp Gly Thr Asp Lys Arg Ser Ser Gln Ser Ala Asp Ser Gly  
   130                          135                          140  
 Asp Ser Ser Asp Glu Asp Gln  
   145                          150

<210> 866  
 <211> 203  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 866  
 Arg Phe Lys Gln Leu Leu Glu Glu Ala Ser Gln Asp Ile Asp His Thr  
   1                          5                          10                          15  
 Thr Asp Tyr Tyr Thr Phe Arg Lys Lys Trp Gly Asn Asp Pro Arg Phe  
                           20                          25                          30  
 Glu Ala Leu Asp Arg Lys Asp Arg Glu Asn Leu Leu Asn Glu Arg Val  
                           35                          40                          45  
 Leu Pro Leu Lys Lys Ala Ala Glu Glu Arg Ala Gln Ala Met Arg Ala  
   50                          55                          60

Ala Ala Thr Ser Ser Phe Lys Ser Leu Leu Arg Asp Arg Gly Asp Ile  
65 70 75 80  
Thr Val Asn Ser Arg Trp Ser Arg Val Lys Asp Ser Leu Arg Asp Asp  
85 90 95  
Pro Arg Tyr Lys Ser Val Lys His Glu Asp Arg Glu Ala Leu Phe Asn  
100 105 110  
Glu Tyr Ile Ala Glu Leu Lys Ala Val Glu Asp Arg Glu Glu Lys Glu  
115 120 125  
Ala Lys Ala Lys Arg Glu Glu Gln Glu Lys Leu Lys Glu Arg Glu Arg  
130 135 140  
Glu Leu Arg Lys Arg Lys Glu Arg Glu Glu Gln Glu Met Glu Arg Val  
145 150 155 160  
Arg Val Lys Ile Arg Arg Lys Glu Ala Ile Ala Ser Phe Gln Ala Leu  
165 170 175  
Leu Val Glu Thr Ile Lys Asp Pro Gln Leu Pro Gly Gln Ser Gln Lys  
180 185 190  
Leu Asn Leu Thr Lys Ile Leu Arg Thr Cys Glu  
195 200

&lt;210&gt; 867

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 867

Glu Ile Lys Asn Tyr Trp Asn Thr Arg Ile Lys Arg Leu Gln Arg Thr  
1 5 10 15  
Gly Met Pro Ile Tyr Pro Thr Glu Val Cys Leu Gln Val Ser Ser Glu  
20 25 30  
Asn Gln Glu Thr His Asn Met Gly Asn Leu His Thr Ala Gly Glu Asp  
35 40 45  
Asn Cys Asp Leu Ser Gln Ala Asp Pro Leu Glu Ile Pro Glu Val Asp  
50 55 60  
Phe Arg Lys Leu Glu Leu His Leu Gly Phe Ser Ser Phe Trp Ser Thr  
65 70 75 80  
Leu Leu Asp Val Pro Pro Cys Gly Phe Gly Arg Glu Ala Met Cys Leu  
85 90 95  
Ser Asp Ala Tyr Cys Leu Pro Phe Pro Ser Ser Arg Ser Pro Lys Arg  
100 105 110  
Leu

&lt;210&gt; 868

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 868

Thr Thr Arg Ile Pro Ala Ala Asn Leu Glu Asp Leu Phe Asp Asn His  
1 5 10 15  
Asn Met Ala Arg Ile Arg Asp Val Trp Ala Pro Asn Leu Glu Ile Glu  
20 25 30  
Met Gln Asn Ile Arg Glu Ala Ile Glu Lys Tyr Ser Tyr Val Ser Met  
35 40 45  
Asp Thr Glu Phe Leu Ser Gly Ala Arg Pro Ile Gly Asn Phe Lys Thr  
50 55 60  
Ser Ser Asp Tyr His Tyr Gln Thr Met Arg Cys Asn Val Asp Leu Leu  
65 70 75 80  
Lys Ile Ile Gln Val Gly Ile Thr Leu Ala Asp Glu Glu Gly Leu Phe  
85 90 95  
Pro Gln Asp Cys Ser Thr Trp Gln Val Gln Leu

100

105

<210> 869  
 <211> 85  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 869  
 Met Gly Arg Ser Pro Cys Cys Glu Gly Asn Gly Leu Lys Lys Gly Pro  
 1 5 10 15  
 Trp Ser Ser Glu Glu Asp Lys Lys Leu Leu Asp Phe Ile Gln His  
 20 25 30  
 Gly His Gly Ser Trp Ile Ser Leu Pro Lys Arg Ala Gly Leu Asn Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Trp Pro Asp  
 50 55 60  
 Ile Lys Arg Gly Ser Phe Ser Pro Glu Glu Glu Gln Thr Ile Leu His  
 65 70 75 80  
 Leu His Ser Val Leu  
 85

<210> 870  
 <211> 85  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 870  
 Met Pro Trp Lys Thr Gly Leu Thr Gly Ser Lys Thr Glu Glu Asp Lys  
 1 5 10 15  
 Ala Leu Gln Leu Cys Arg Glu Arg Lys Lys Ser Val Arg Gln Ala Val  
 20 25 30  
 Asp Gly Trp Gly Ser Leu Val Tyr Ala His Phe Met Phe Val Gln Ser  
 35 40 45  
 Leu Arg Asn Val Gly Thr Ala Leu Thr Lys Phe Phe Glu Thr Glu Ser  
 50 55 60  
 Pro Asn Gly Ser Pro Ser Tyr Ala Ser Met Ser Thr Thr Pro Glu Pro  
 65 70 75 80  
 Ile Ala Leu Thr Glu  
 85

<210> 871  
 <211> 104  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 871  
 Gly Leu Leu Arg Cys Ser Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr  
 1 5 10 15  
 Leu Arg Pro Gly Ile Lys Arg Gly Ser Phe Thr Asp Gln Glu Lys  
 20 25 30  
 Met Ile Val His Leu Gln Ala Leu Leu Gly Asn Arg Gly Ala Ala Ile  
 35 40 45  
 Ala Ser Tyr Leu Pro Gln Arg Thr Asp Asn Asp Ile Lys Asn Tyr Trp  
 50 55 60  
 Asn Thr His Leu Lys Lys Lys Leu Lys Lys Leu Gln Gly Gln Ala Asn  
 65 70 75 80  
 Pro Asp Asp Asp Asp His Asn His His Pro Gln Gly Phe Asn Ala Thr  
 85 90 95  
 Ser His Ser Asn Pro Lys Gly Gln  
 100

<210> 872  
 <211> 102  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 872  
 Met Ala Arg Thr Pro Cys Cys Glu Lys Met Gly Met Lys Lys Gly Pro  
 1 5 10 15  
 Trp Thr Pro Glu Glu Asp Gln Ile Leu Ile Ser His Ile His Gln Phe  
 20 25 30  
 Gly His Ser Asn Trp Arg Ala Leu Pro Arg Gln Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
 50 55 60  
 Val Lys Arg Gly Asn Phe Thr Asp Asp Glu Arg Asp Thr Ile Ile Glu  
 65 70 75 80  
 Leu His Gln Val Leu Gly Asn Arg Trp Ser Ala Ile Ala Ser Arg Leu  
 85 90 95  
 Pro Gly Arg Thr Asp Asn  
 100

<210> 873  
 <211> 125  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 873  
 Trp Thr Ala Glu Glu Asp Lys Lys Leu Ile Asn Phe Ile Leu Thr His  
 1 5 10 15  
 Gly Gln Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Leu Arg  
 20 25 30  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp  
 35 40 45  
 Leu Lys Arg Gly Leu Leu Ser Glu Tyr Glu Glu Lys Met Val Ile Asp  
 50 55 60  
 Leu His Ala Gln Leu Gly Asn Arg Trp Ser Lys Ile Ala Ser His Leu  
 65 70 75 80  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn His Trp Asn Thr His Ile  
 85 90 95  
 Lys Lys Lys Leu Lys Lys Met Gly Ile Asp Pro Leu Thr His Lys Pro  
 100 105 110  
 Leu Val Thr Asn Asn Asp Asn Thr Thr Asp Gln Gln Pro  
 115 120 125

<210> 874  
 <211> 114  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 874  
 Met Asp Lys Lys Pro Asp Asp Asp Ser Gly Lys Ser Gln Asp Val Glu  
 1 5 10 15  
 Val Arg Lys Gly Pro Trp Thr Met Glu Glu Asp Leu Ile Leu Ile Asn  
 20 25 30  
 Tyr Ile Ala Asn His Gly Glu Gly Ser Trp Asn Ser Leu Ala Lys Ala  
 35 40 45  
 Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn  
 50 55 60  
 Tyr Leu Arg Pro Asp Val Arg Arg Gly Asn Ile Thr Thr Glu Glu Gln  
 65 70 75 80  
 Leu Leu Ile Met Glu Leu His Ala Lys Trp Gly Asn Arg Asp Ala His

				85					90					95					
Lys	Ser	His	Asn	Phe	Ser	Leu	His	Arg	Phe	Tyr	Asn	Ile	Ile	Pro	Ile				
			100					105					110						
Asp	His																		

<210> 875  
 <211> 127  
 <212> PRT  
 <213> Eucalyptus grandis

Asn	Gly	Asp	Ser	Val	Lys	Asp	Asp	Leu	Asp	Thr	Asp	Glu	Tyr	Glu	Thr				
1				5					10					15					
His	Ala	Thr	Val	Leu	Asp	Lys	Leu	Leu	Ala	Trp	Glu	Lys	Lys	Leu	Tyr				
			20					25						30					
Glu	Glu	Val	Lys	Gln	Gly	Glu	His	Met	Lys	Leu	Glu	Tyr	Gln	Lys	Lys				
			35				40						45						
Val	Ala	Leu	Leu	Asn	Lys	Gln	Lys	Lys	Arg	Gly	Ala	Ser	Gly	Glu	Ser				
			50			55					60								
Leu	Glu	Lys	Thr	Lys	Ala	Val	Ser	His	Leu	His	Thr	Thr	Tyr	Ile					
65				70					75					80					
Val	Asp	Met	Gln	Ser	Met	Asp	Ser	Thr	Ala	Ser	Glu	Ile	Asn	His	Ile				
			85					90					95						
Arg	Asp	Lys	Gln	Leu	Tyr	Pro	Lys	Leu	Ala	Gln	Leu	Val	Asp	Gly	Met				
			100					105					110						
Ala	Asn	Met	Trp	Glu	Lys	Met	Arg	Met	His	His	Asp	Lys	Gln	Glu					
			115				120						125						

<210> 876  
 <211> 153  
 <212> PRT  
 <213> Eucalyptus grandis

Pro	Glu	Thr	Val	His	Val	Gln	Asn	Tyr	Ser	Pro	Ile	His	Gln	Met	Gly				
1				5					10					15					
Ile	Asp	Gly	Phe	Phe	Pro	Ala	His	Pro	Ser	Pro	Gln	Asn	Pro	Ser	Tyr				
			20					25					30						
His	Ser	Tyr	Ser	Pro	Asn	Asn	Arg	Pro	Asn	Phe	Pro	Pro	Pro	Ser	Pro				
			35				40					45							
Gln	Thr	Ser	Gln	Trp	Asp	Tyr	Phe	Trp	Asn	Pro	Phe	Ser	Ser	Leu	Asp				
			50			55					60								
Tyr	Tyr	Gly	Tyr	Pro	Thr	Arg	Ser	Ser	Ile	Asp	His	Met	Ala	Met	Asp				
65				70					75					80					
Asp	Glu	Thr	Arg	Gly	Leu	Arg	Gln	Val	Arg	Glu	Glu	Glu	Gly	Ile	Pro				
			85					90					95						
Asp	Leu	Glu	Glu	Glu	Thr	Glu	His	Glu	Glu	Cys	Asp	His	His	Ser	Tyr				
			100					105					110						
Val	Asp	Glu	Asp	Arg	Gly	Asn	Arg	Asp	Ala	Asn	Phe	Pro	Thr	Glu	Glu				
			115				120					125							
Val	Leu	Val	Glu	Asp	Val	Asp	Asp	Glu	Glu	Glu	Asp	Glu	Asp	Glu	Gly				
			130			135						140							
Asn	Arg	His	Ser	Cys	Glu	Ser	Glu	Asp											
145						150													

<210> 877  
 <211> 62  
 <212> PRT  
 <213> Eucalyptus grandis

&lt;400&gt; 877

Val Leu Arg Ala Gln Leu Met Glu Leu Thr Asp Arg Leu Arg Ser Leu  
 1 5 10 15  
 Asn Ser Val Leu Gln Val Val Glu Val Val Ser Gly Leu Ala Ile Asp  
 20 25 30  
 Ile Pro Glu Ile Pro Asp Pro Leu Met Asn Pro Trp Gln Leu Pro Cys  
 35 40 45  
 Pro Met Gln Pro Ile Thr Ala Ser Ala Asp Met Leu Gln Leu  
 50 55 60

&lt;210&gt; 878

&lt;211&gt; 135

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 878

Leu Thr Leu Thr Ala Ala Ser Thr Val Ile Phe Ala Glu Leu Ser Trp  
 1 5 10 15  
 Thr Pro Gly Asp Leu Ile Gln Ala Glu Asp Arg Ala His Arg Ile Gly  
 20 25 30  
 Gln Val Ser Ser Val Asn Ile Tyr Tyr Leu Leu Ala Asn Asp Thr Val  
 35 40 45  
 Asp Asp Ile Ile Trp Asp Val Val Gln Ser Lys Leu Glu Asn Leu Gly  
 50 55 60  
 Gln Val Leu Asp Gly His Glu Asn Thr Leu Glu Val Ser Ala Ser Gln  
 65 70 75 80  
 Pro Thr Arg Asn Ser Pro Ala Lys Gln Lys Thr Phe Asn Ser Pro Gly  
 85 90 95  
 Lys Gln His Thr Phe Asn Ser Pro Gly Lys Gln Gln Lys Phe Asn Ser  
 100 105 110  
 Pro Gly Lys Gln Thr Thr Leu Asp Ser Phe Met Lys Arg Cys Asn Ser  
 115 120 125  
 Gly Asp Pro Ser Glu His Gln  
 130 135

&lt;210&gt; 879

&lt;211&gt; 138

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 879

Met Ala Leu Glu Ala Ile Asn Ser Pro Thr Ala Ala Ser Ala Pro Phe  
 1 5 10 15  
 Gln Phe Met Glu Glu Pro Leu Ser Ser Arg Phe Leu Glu Pro Leu Asn  
 20 25 30  
 Lys Arg Lys Arg Ser Lys Arg Pro His His Pro Pro Ser Glu Asp Glu  
 35 40 45  
 Tyr Leu Ala Leu Cys Leu Ile Met Leu Ala Arg Ser Gly Ala Ala Pro  
 50 55 60  
 Lys Pro Asn His His Ala Ser Pro Ala Pro Leu Pro Pro Pro Pro Pro  
 65 70 75 80  
 Pro Ala Pro Thr Lys Pro Glu Glu Ala Ala Ala Thr Ala Thr Ala Thr  
 85 90 95  
 Ala Ala Pro Ala Asn Asn Leu Ser Tyr Lys Cys Ala Val Cys Gly Lys  
 100 105 110  
 Gly Phe Pro Ser Tyr Gln Ala Leu Gly Gly His Lys Ala Ser His Arg  
 115 120 125  
 Lys Ser Ala Ala Ala Ala Ala Ala Ala  
 130 135

&lt;210&gt; 880

<211> 124  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 880  
 Ala Ile Ala Leu Val Leu Ala Lys Arg Glu Ile Ile Arg Ser Ile Gly  
 1 5 10 15  
 Thr Gly Leu Asp Trp Ser Ser Pro Ser Ala Gly Ser Ser Thr Ser Leu  
 20 25 30  
 Pro Glu Ile Lys Gly Thr Leu Val Ile Cys Pro Val Val Ala Val Thr  
 35 40 45  
 Gln Trp Val Gly Glu Ile Asn Cys Ser Thr Ala Gln Gly Ser Thr Lys  
 50 55 60  
 Val Leu Val Tyr His Gly Ala Asn Arg Gly Lys Thr Ala Asp Gln Phe  
 65 70 75 80  
 Lys Asn Phe Asp Phe Val Val Thr Thr Tyr Ser Leu Val Glu Gly Glu  
 85 90 95  
 Tyr Arg Lys Phe Val Met Pro Pro Lys Lys Lys Cys Ile Tyr Cys Gly  
 100 105 110  
 Lys Leu Leu Tyr Lys Glu Lys Met Thr Val His Leu  
 115 120

<210> 881  
 <211> 196  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 881  
 Pro Asp Leu Pro Gly Asp Asp Leu Ala Leu Glu Phe Glu Glu Phe Asp  
 1 5 10 15  
 Phe Gln Ser Leu Phe Asp Glu Leu Ser Pro Asp Ala Ala Gly Leu Leu  
 20 25 30  
 Asp Ala Ser Asp Val Asp Ala Ser Ser Pro Gly Ser Leu Ser Ser Trp  
 35 40 45  
 Ile Gly Glu Ile Glu Gly Met Leu Met Lys Asp Asp Glu Glu Ala Val  
 50 55 60  
 Ala Val Glu Pro Ser Gln Glu Val Phe Asp Arg Phe Phe Ala Gly Leu  
 65 70 75 80  
 Leu Val Asp Ser Pro Glu Gly Gly Pro Ala Glu Ala Thr Asp Gly Ala  
 85 90 95  
 Ser Asp Lys Glu Ser Asn Ser Ser Asp Gly Gly Gly Gly Gly Gly Gly  
 100 105 110  
 Glu Arg Asp Glu Lys Leu Val Val Gly Asp Asn Glu Leu Ser Glu Asp  
 115 120 125  
 Ala Asp Asp Asp Asp Pro Val Ser Lys Lys Gln Arg Arg Gln Leu Arg  
 130 135 140  
 Asn Lys Asp Ala Ala Ala Arg Ser Arg Glu Arg Lys Arg Ser Tyr Val  
 145 150 155 160  
 Lys Glu Leu Glu Met Lys Ser Lys Tyr Met Glu Gly Glu Cys Arg Arg  
 165 170 175  
 Leu Gly Arg Leu Leu Gln Cys Phe Val Ala Glu Asn Gln Ala Leu Arg  
 180 185 190  
 Leu Asn Leu Glu  
 195

<210> 882  
 <211> 102  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 882

Val Ile Ser Ser Gln Ser Met His Leu Gly Val Leu Ala Thr Ala Ser  
 1 5 10 15  
 His Ala Val Thr Gln Thr Leu Phe Val Val Tyr Tyr Lys Pro Arg  
 20 25 30  
 Thr Ser Gln Phe Ile Ile Ser Leu Asn Lys Tyr Leu Glu Ala Leu Asn  
 35 40 45  
 Asn Lys Phe Thr Val Gly Met Arg Phe Lys Met Arg Phe Glu Gly Glu  
 50 55 60  
 Asp Ser Pro Glu Arg Arg Phe Ser Gly Thr Ile Val Gly Val Glu Asp  
 65 70 75 80  
 Phe Ser Pro Gln Trp Asp Asn Ser Ser Trp Arg Ser Leu Lys Val His  
 85 90 95  
 Trp Asp Glu His Ala Ser  
 100

<210> 883  
 <211> 69  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 883  
 Phe Asn Gln Leu Asp Pro Arg Ile Asn Arg Lys Pro Phe Ser Glu Glu  
 1 5 10 15  
 Glu Glu Glu Arg Leu Leu Thr Ala His Lys Leu Cys Gly Asn Lys Trp  
 20 25 30  
 Ala Met Ile Ala Arg Leu Phe Pro Gly Arg Thr Asp Asn Ala Val Lys  
 35 40 45  
 Asn His Trp His Val Ile Val Ala Arg Lys Gln Arg Glu Gln Ser Asn  
 50 55 60  
 Asn Ala Arg Gly Arg  
 65

<210> 884  
 <211> 74  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 884  
 Gln Lys Tyr Phe Ile Arg Gln Ser Asn Val Ser Lys Arg Lys Arg Arg  
 1 5 10 15  
 Ser Ser Leu Phe Asp Ile Val Ala Glu Glu Ser Val Asp Val Pro Met  
 20 25 30  
 Gly Ser Arg Asp Phe Phe Ala Val Asp Glu Gln Gln Gln Glu Thr Glu  
 35 40 45  
 Val Asn Asp Ala Leu Gln Gln Leu Pro Pro Asp Val Asp Glu Glu Cys  
 50 55 60  
 Glu Ser Met Asp Ser Thr Asn Ser Asn Thr  
 65 70

<210> 885  
 <211> 61  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 885  
 Ser Ser Ser Ser Arg His Glu Ser Arg His Pro Ile Pro Leu Leu Thr  
 1 5 10 15  
 Asn Gly Gln Pro Met Ser Gly Glu Ile Pro Cys Ala Ser Ile Asp Ser  
 20 25 30  
 Pro Ser Val Arg Thr Thr Ser Gly Pro Leu Gly Pro Phe Asp Lys His  
 35 40 45



Val His Ser Leu Pro Tyr Val Asp Pro Arg Gln Pro Val  
 50 55 60

<210> 886  
 <211> 142  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 886  
 Ser Pro Pro Leu Ser Ala His Val Ala Ser His Lys Gly Leu His Gln  
 1 5 10 15  
 Ala Ser Lys Pro Lys Ile His Glu Cys Asn Ile Cys Gly Ser Glu Phe  
 20 25 30  
 Ala Ser Gly Gln Ala Leu Gly Gly His Met Arg Arg His Arg Ser Ala  
 35 40 45  
 Pro Pro Pro Thr Ala Thr Ser Ala Asp Ala Thr Ser Pro Thr Asn Pro  
 50 55 60  
 Pro Ala Ala Ala Ala Ile Thr Thr Glu Lys Ser Arg Asn Ile Leu Ser  
 65 70 75 80  
 Leu Asp Leu Asn Leu Pro Ala Pro Asn Gly Gly Gly Ser Pro Pro Pro  
 85 90 95  
 Ser Ala Pro Pro Pro Gly Glu Leu Glu Val Pro Ile Arg His Lys Ser  
 100 105 110  
 Thr Ala His His Thr Ser Leu Ala Arg Leu Gly Gly Leu Pro Leu Leu  
 115 120 125  
 Lys Lys Lys Glu Lys Thr Gly Ser His Val Asn Gln Cys Asn  
 130 135 140

<210> 887  
 <211> 139  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 887  
 Ala Val Ser Asp Ile Asn Leu Val Ser Asn Ser Thr His Ser Ser Tyr  
 1 5 10 15  
 Glu Asp Gly Gly Ser Pro Arg Arg Ile Thr Ser Glu Ser Asp Pro Lys  
 20 25 30  
 Asp Ala Pro Met Gly Thr Glu Ser Leu Leu Ser Ala Pro Glu Ala Val  
 35 40 45  
 Glu Leu Ser Asp Thr Gly Thr Ser Phe Thr Phe Lys Met Asp Ser Ser  
 50 55 60  
 Met Gln Arg Lys Pro Pro Val Asp Glu Ser Pro Arg Met His Pro Leu  
 65 70 75 80  
 Pro Met Asn Leu Thr Thr Glu Glu Gly Asp Asn Asn Val Ser Cys Gln  
 85 90 95  
 Leu Asn Leu Ser Leu Ala Ser Ser Leu Leu Gln Val Asp His Ser Gln  
 100 105 110  
 Gln Phe Asn Arg Leu Asn Val Leu Gly Ser Glu Thr Ser Lys Ser Pro  
 115 120 125  
 Asp Ala Arg Ser Asn Ala Ser Ile Thr Glu Ser  
 130 135

<210> 888  
 <211> 36  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 888  
 His Pro Glu Tyr Asn Ser Ser Pro Val Gly Tyr Met Glu Thr Asn Lys  
 1 5 10 15

Ala Arg Leu Val Leu Glu Lys Asp Asp Leu Gly Leu Asn Leu Met Pro  
                   20                  25                  30  
 Pro Ser Thr Cys  
                   35

<210> 889  
 <211> 176  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 889  
 Asn Ile Gly Ala Lys Ala Asp Val Phe His Ile Leu Ser Gly Met Trp  
   1                  5                  10                  15  
 Lys Thr Pro Ala Glu Arg Cys Phe Met Trp Leu Gly Gly Phe Arg Ser  
                   20                  25                  30  
 Ser Glu Leu Leu Lys Ile Leu Gly Asn His Leu Glu Pro Leu Thr Asp  
                   35                  40                  45  
 Gln Gln Leu Met Gly Ile Cys Asn Leu Gln Gln Ser Ser Gln Gln Ala  
   50                  55                  60  
 Glu Asp Ala Leu Ser Gln Gly Met Glu Ala Leu Gln Gln Ser Leu Val  
 65                  70                  75                  80  
 Asp Thr Leu Ser Ser Thr Thr Leu Ser Pro Thr Gly Ser Gly Asn Val  
                   85                  90                  95  
 Ala Glu Tyr Met Gly Gln Met Ala Ile Ala Met Gly Lys Leu Ala Thr  
                   100                  105                  110  
 Leu Glu Asn Phe Val His Gln Ala Asp Leu Leu Arg Gln Gln Thr Leu  
                   115                  120                  125  
 Gln Gln Met His Arg Ile Leu Thr Thr Arg Gln Ala Ala Arg Ala Leu  
   130                  135                  140  
 Leu Val Ile Asn Asp Tyr Ile Ser Arg Leu Arg Ala Leu Ser Ser Leu  
 145                  150                  155                  160  
 Trp Leu Ala Arg Pro Arg Thr Glu Asn Ile Cys Ser Ala Lys Leu Phe  
                   165                  170                  175

<210> 890  
 <211> 33  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 890  
 Lys Lys Arg Leu Met Val Ala Ser Ala Phe Gly Glu Asp Glu Lys Ala  
   1                  5                  10                  15  
 Gly Arg Gln Thr Arg Leu Thr Val Glu Asp Leu Asn Tyr Leu Phe Met  
                   20                  25                  30  
 Ala

<210> 891  
 <211> 51  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 891  
 Met Arg Asp Leu Cys Leu Asp Gln Arg Glu Met Ala Ser Gly Ser Ser  
   1                  5                  10                  15  
 Arg Val Glu Ala Arg Ala Asp Ala Glu Met Ala Leu Tyr Asn Glu Leu  
                   20                  25                  30  
 Trp Gln Ala Cys Ala Gly Pro Leu Val Ala Val Pro Arg Gln Gly Glu  
                   35                  40                  45  
 Arg Val Phe  
                   50

<210> 892  
 <211> 77  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 892  
 Met Leu Ser Pro Ser Gly Ser Ser Pro Leu Ala Gln Ser Thr Gly Arg  
 1 5 10 15  
 His Pro Leu Tyr Arg Gly Val Arg Ser Arg Ser Gly Lys Trp Val Ser  
 20 25 30  
 Glu Ile Arg Glu Pro Arg Lys Thr Arg Ile Trp Leu Gly Thr Tyr  
 35 40 45  
 Pro Asn Pro Glu Met Ala Ala Ala Ala Phe Asp Val Ala Ala Leu Ala  
 50 55 60  
 Leu Lys Gly Ser Asp Ala Ala Leu Asn Phe Pro His Asp  
 65 70 75

<210> 893  
 <211> 95  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 893  
 Phe Pro Gln Gly His Met Glu Gln Leu Glu Ala Ser Thr Asn Gln Glu  
 1 5 10 15  
 Leu Asn Gln Arg Ile Pro Leu Phe Asn Leu Thr Ser Lys Ile Leu Cys  
 20 25 30  
 Gln Val Val Asn Val Gln Leu Leu Ala Glu Gln Glu Thr Asp Glu Val  
 35 40 45  
 Tyr Ala Gln Ile Thr Leu Ile Pro Ala Gly Asn Leu Met Glu Pro Thr  
 50 55 60  
 Ser Pro Asp Pro Val Ser Ala Glu Thr Pro Arg Thr Arg Val His Ser  
 65 70 75 80  
 Phe Cys Lys Val Leu Thr Ala Ser Asp Thr Ser Thr His Gly Gly  
 85 90 95

<210> 894  
 <211> 79  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 894  
 Met Gly Ser Asn Ile Asn Phe Lys Asn Phe Ser Thr Asp Pro Thr Pro  
 1 5 10 15  
 Thr Asn Asn Arg Pro Pro Gly Asn Thr Leu Leu Thr Arg Gln Pro Ser  
 20 25 30  
 Val Tyr Thr Leu Thr Phe Glu Glu Phe Gln Asn Ser Ile Gly Lys Asp  
 35 40 45  
 Phe Gly Ser Met Asn Met Asp Glu Leu Ile Lys Asn Ile Trp Ser Ala  
 50 55 60  
 Glu Glu Asn Gln Ser Met Ala Ser Ala Ser Gly Ala Cys Gly Gly  
 65 70 75

<210> 895  
 <211> 57  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 895  
 Met Gln Ala Cys Gly Ser Tyr Glu Tyr Ser Glu Gln Tyr His Asp Glu

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      1           5           10           15
Val Lys Pro Ala Tyr Gly Pro Gln Ile Ser Ala His Ser Gln Tyr Leu
      20           25           30
Gly Tyr Asn Ser Leu Arg Leu Gly Leu Pro Leu Arg Val Ala Glu Glu
      35           40           45
Pro Val Tyr Val Asn Ala Lys Gln Tyr
      50           55

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<210> 896  
 <211> 167  
 <212> PRT  
 <213> Eucalyptus grandis

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      <400> 896
Pro Asp Val Pro Leu Pro Ser Pro Ala Gly Asp Val Thr Asp Ala Glu
      1           5           10           15
Trp Phe Tyr Val Met Ser Leu Thr Arg Ser Phe Ser Ala Gly Asp Gly
      20           25           30
Ile Pro Gly Lys Ala Leu Ser Thr Gly Ser Leu Val Trp Leu Thr Gly
      35           40           45
Ala Arg Glu Leu Glu Ser Tyr Lys Cys Asp Arg Ala Lys Glu Ala Glu
      50           55           60
Leu His Gly Ile Arg Thr Met Val Cys Ile Pro Thr Gly Asp Gly Val
      65           70           75           80
Leu Glu Leu Gly Ser Cys Asp Val Ile Pro Glu Asn Trp Gly Leu Val
      85           90           95
Gln Arg Ala Lys Ser Leu Phe Gly Ser Asp Leu Leu Leu Pro Lys His
      100           105           110
Pro Pro Pro Pro Pro Pro Phe Gln Leu His His Asp His Ser Asp
      115           120           125
Ile Ser Phe Ala Asp Ile Gly Ile Ile Ala Gly Val Gln Glu Asn Asp
      130           135           140
Phe Ala Pro His Asp Asp His Glu Lys Lys Val Lys Lys Lys Gln Pro
      145           150           155           160
Leu Val Glu Gly Ala Gly Gly
      165

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<210> 897  
 <211> 125  
 <212> PRT  
 <213> Eucalyptus grandis

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      <400> 897
Val Ala Gly Met Thr Arg Gly Arg Arg Asp Gly Ile Leu Lys Ser Glu
      1           5           10           15
Lys Thr Arg His Val Val Lys Ile Gly Pro Met His Leu Lys Gly Val
      20           25           30
Trp Ile Pro Tyr Glu Arg Ala Leu Glu Phe Ala Asn Arg Glu Lys Ile
      35           40           45
Thr Glu Tyr Leu Tyr Pro Leu Phe Val His Asp Ile Gly Ala Leu Leu
      50           55           60
Tyr His Pro Ser Asn Pro Ser Gly Ala Thr Ser Arg Ala Gly Asn Ala
      65           70           75           80
Gln Asn Thr Leu Ala Ala Ile Asp Arg Arg Arg Asn Glu Ala Arg Met
      85           90           95
Ala Ala Ser Ile Gln Gly Gln Ala Val Ser Gly Val Leu Val Ser Pro
      100           105           110
Val Ala Gln Thr Ala Gly Gly Arg Pro Ser Val Asp Arg
      115           120           125

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<210> 898

<211> 120  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 898  
 Asn Asn Leu Ser Leu Tyr Asp Asn Gly Val Gly Ser Thr Pro Arg Pro  
 1 5 10 15  
 Arg Ser Asn Ala Glu Gln Leu Ile Phe Arg Ala Ala Leu Gln Asp Leu  
 20 25 30  
 Ser Gln Pro Lys Ser Glu Glu Thr Pro Pro Asp Gly Ala Leu Ala Val  
 35 40 45  
 Pro Leu Leu Arg His Gln Lys Ile Ala Leu Ser Trp Met Val Lys Lys  
 50 55 60  
 Glu Thr Ala Ile Asn Cys Cys Gly Gly Ile Leu Ala Asp Asp Gln Gly  
 65 70 75 80  
 Leu Gly Lys Thr Val Ser Thr Ile Ala Leu Ile Leu Lys Glu Arg Pro  
 85 90 95  
 Pro Thr Phe Lys Gln Cys Gln Glu Asn Pro Lys Gln Glu Leu Gln Thr  
 100 105 110  
 Phe Asp Leu Asp Glu Asp Glu Asn  
 115 120

<210> 899  
 <211> 58  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 899  
 Met Ser Leu Ser Ala Lys Ser Glu Ser Ile Gln Ile Arg Asp Val Trp  
 1 5 10 15  
 Asp Asp Asn Leu Asp Glu Glu Phe Ala Arg Ile Arg Glu Ile Val Asp  
 20 25 30  
 Asp Tyr Pro Tyr Val Ala Met Asp Thr Glu Phe Pro Gly Ile Val Val  
 35 40 45  
 Arg Pro Val Gly Asn Phe Lys Asn Ser Ser  
 50 55

<210> 900  
 <211> 94  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 900  
 Met Ala Asp Ser Asp Asn Asp Ser Gly Gly His Asn Asn Ala Asn Ser  
 1 5 10 15  
 Glu Ser Ala Ala Ala Leu Ala Arg Glu Gln Asp Arg Phe Leu Pro Ile  
 20 25 30  
 Ala Asn Val Ser Arg Ile Met Lys Lys Ala Leu Pro Ala Asn Ala Lys  
 35 40 45  
 Ile Ser Lys Glu Ala Lys Glu Thr Val Gln Glu Cys Val Ser Glu Phe  
 50 55 60  
 Ile Ser Phe Ile Thr Gly Glu Ala Ser Asp Gly Ser Ser Ser Ile Gly  
 65 70 75 80  
 Gly Gly Gly Gly Gly Val Val Asn Ser Gly Gly Gly Ser Ala  
 85 90

<210> 901  
 <211> 169  
 <212> PRT  
 <213> Eucalyptus grandis

&lt;400&gt; 901

Lys Ile Asn Pro Asp Arg Trp Glu Phe Val Asn Gln Gly Phe Gln Lys  
 1 5 10 15  
 Gly Asn Lys His Leu Leu Lys Asn Ile Lys Arg Arg Cys Lys Phe Ser  
 20 25 30  
 Glu His Arg Lys Thr Ser Ser Ser Thr Val Thr Ser Asp Tyr Gln Lys  
 35 40 45  
 Ala Glu Asn Glu Val Glu Leu Asn Thr Leu Lys Lys Gly Gln Glu Val  
 50 55 60  
 Leu Lys Thr Arg Ser Leu Lys Leu Arg Glu Glu Arg Lys Ser Phe Gln  
 65 70 75 80  
 His Glu Ile Glu Gln Val Ala Glu Arg Val Arg His Ala Glu Cys Arg  
 85 90 95  
 Asn Gln Gln Ile Phe Leu Phe Leu Thr Lys Ala Ala Lys Ser Pro Asn  
 100 105 110  
 Phe Val His His Leu Ile Gln Lys Lys Ser Gln Lys Arg Asp Leu Glu  
 115 120 125  
 Thr Cys Glu Ser Ser Lys Lys Ser Lys Leu Leu Gly Ser Asp Ala Glu  
 130 135 140  
 Ala Thr Lys Phe Leu Asn Glu Ala Met Asp His Met Ile Lys Ser Pro  
 145 150 155 160  
 Asn Val Asp Cys Leu Arg Ile Ser Asp  
 165

&lt;210&gt; 902

&lt;211&gt; 266

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 902

Gly Ile Leu Ala Ala Ala Ala His Ala Ala Ala Asn Asn Ser Pro Phe  
 1 5 10 15  
 Thr Ile Phe Tyr Asn Pro Arg Ala Ser Pro Ser Glu Phe Val Ile Pro  
 20 25 30  
 Leu Ala Lys Tyr Asn Lys Ala Phe Tyr Thr Gln Val Ser Leu Gly Met  
 35 40 45  
 Arg Phe Arg Met Met Phe Glu Thr Glu Glu Ser Gly Val Arg Arg Tyr  
 50 55 60  
 Met Gly Thr Ile Thr Gly Ile Ser Asp Leu Asp Ser Val Arg Trp Lys  
 65 70 75 80  
 Asn Ser Gln Trp Arg Asn Leu Gln Val Gly Trp Asp Glu Ser Thr Ala  
 85 90 95  
 Gly Glu Arg Pro Ser Arg Val Ser Met Trp Glu Ile Glu Pro Val Val  
 100 105 110  
 Thr Pro Phe Tyr Ile Cys Pro Pro Phe Phe Arg Pro Lys Phe Pro  
 115 120 125  
 Arg Gln Pro Asp Asp Glu Ser Asp Val Glu Asn Ala Phe Lys Arg Ala  
 130 135 140  
 Met Pro Trp Leu Gly Asp Glu Phe Gly Ile Lys Asp Thr Pro Asn Ser  
 145 150 155 160  
 Ile Phe Pro Gly Leu Ser Leu Met Gln Trp Met Ser Met Gln Gln Ser  
 165 170 175  
 Asn Pro Leu Gln Ala Thr Gln Ser Gly Leu Leu Pro Pro Met Leu Ser  
 180 185 190  
 Ser Thr Gly Leu His Asn Asn Leu Gly Ile Asp Asp Pro Ser Lys Leu  
 195 200 205  
 Leu Ser Phe Gln Ala Pro Thr Gln Gly Leu Gln Phe Asn Lys Thr Asn  
 210 215 220  
 Pro Gln Asn Gln Val Ser Gln Leu Leu Gln Pro Ser Met Ala Trp Ser  
 225 230 235 240  
 Gln Gln His Gln Leu Gln Gln Leu Leu Gln Asn Pro Leu Gly His Gln

245 250 255  
 Gln Gln Gln Gln Gln Gln Gln Leu Gln Arg  
 260 265

<210> 903  
 <211> 101  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 903  
 Val Pro Ser Met Lys Pro Glu Tyr Pro Val Pro Asn Gly Ile Gly Ala  
 1 5 10 15  
 Ser Asp Phe Gly Glu Ser Phe Arg Phe Gln Lys Val Leu Gln Gly Gln  
 20 25 30  
 Glu Asn Leu Gly Phe Gly Thr Pro Tyr Asp Gly Ile Glu Thr Gln Ser  
 35 40 45  
 His Arg Leu Ser Glu Val Arg Arg His His Pro Asp Asp Ser Gly Gly  
 50 55 60  
 Ser Glu Ala Ala Ala Thr Arg Asn Gly Ile Thr Asn Pro Ser Val Asn  
 65 70 75 80  
 Ala Ser Val Thr Tyr Lys Gly Met Gly Phe Gly Glu Ser Phe Arg Phe  
 85 90 95  
 Arg Glu Val Leu Gln  
 100

<210> 904  
 <211> 142  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 904  
 Pro Pro Ser Pro Leu Leu Pro Pro Pro Ser Ile Pro Lys Thr Leu Leu  
 1 5 10 15  
 Arg Ile Asp Ser Gly Ser Pro Leu Arg Pro Pro Pro Pro Pro Ala Ala  
 20 25 30  
 Met Asp Ala Ala Pro Pro Gly Gly Gly Gly Gly Gly Gly Pro Ala  
 35 40 45  
 Pro Phe Leu Leu Lys Thr Tyr Glu Met Val Asp Asp Ala Gly Thr Asp  
 50 55 60  
 Glu Ile Val Ala Trp Ser Ser Gly Lys Thr Ser Phe Val Val Trp Asn  
 65 70 75 80  
 Pro Pro Glu Phe Ala Arg Leu Leu Leu Pro Thr Tyr Phe Lys His Asn  
 85 90 95  
 Asn Phe Ser Ser Phe Ile Arg Gln Leu Asn Thr Tyr Gly Phe Arg Lys  
 100 105 110  
 Ile Asp Pro Glu Arg Trp Glu Phe Ala Asn Glu Glu Phe Val Lys Asp  
 115 120 125  
 Lys Lys His Leu Leu Lys Asn Ile His Arg Arg Lys Pro Ile  
 130 135 140

<210> 905  
 <211> 80  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 905  
 Met Tyr Val Leu Glu Gly Val Thr Pro Cys Ile Gln Ser Met Gln Leu  
 1 5 10 15  
 Gln Ala Gly Asp Thr Val Thr Phe Ser Arg Met Asp Pro Glu Ala Lys  
 20 25 30  
 Leu Ile Met Gly Phe Arg Lys Ala Ser Thr Ser Met Met Gln Asp Ser

```

      35              40              45
Gln Leu Ala Ala Val Ser Asn Gly Asn His Ser Ser Glu Ala Leu Ile
  50              55              60
Ser Gly Gly Phe Glu Asn Val Pro Met Ile Ser Gly Tyr Ser Ser Leu
65              70              75              80

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<210> 906  
 <211> 30  
 <212> PRT  
 <213> Eucalyptus grandis

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      <400> 906
Arg Thr Gly Lys Ala Glu Ser Glu Cys Leu Cys Pro Arg Asn Ser Gly
  1              5              10              15
Leu Leu Asp Ala Leu Val His Glu Ser Lys Thr Met Ser Ser
      20              25              30

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<210> 907  
 <211> 69  
 <212> PRT  
 <213> Eucalyptus grandis

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      <400> 907
Met Asn Gln Val Ala Asp Arg Gln Ile Pro Phe Tyr Asn Leu Pro Ser
  1              5              10              15
Lys Ile Leu Cys Arg Val Ile Asn Val Gln Leu Arg Ala Glu Pro Glu
      20              25              30
Thr Asp Glu Leu Phe Ala Gln Val Thr Leu Leu Pro Val Pro Asn Gln
      35              40              45
Asp Glu Thr Ala Val Glu Lys Glu Thr Gly Ile Pro Cys Leu Gln Arg
  50              55              60
Pro Arg Val His Ser
65

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<210> 908  
 <211> 60  
 <212> PRT  
 <213> Eucalyptus grandis

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      <400> 908
Thr Phe Met Gly Ile Cys Ser Leu Gln His Ser Ser Gln Gln Ala Glu
  1              5              10              15
Glu Ala Leu Ser Gln Gly Leu Glu Gln Leu Gln Gln Ser Leu Val Asp
      20              25              30
Thr Ile Ala Gly Gly Pro Ser Ile Glu Gly Met Gln Gln Met Ala Ile
      35              40              45
Ala Leu Gly Lys Leu Thr Asn Leu Glu Gly Phe Val
  50              55              60

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<210> 909  
 <211> 139  
 <212> PRT  
 <213> Eucalyptus grandis

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      <400> 909
Ile Gly Tyr Pro Lys Met Pro Leu Gln Ala Ser Ile Ser Thr Gln Ser
  1              5              10              15
Asp Phe Gln Ala Asp Gly Ser Gly His Gly Val Pro Ile Pro Gln Gly
      20              25              30
Ala Asp Ser Gly Ser Leu Gly Ile Ser Ala Leu Pro Thr Ile Gln Arg
      35              40              45

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Asp Ser Gly Val His Val Lys Gln Thr Thr Ser Glu Ser Ser Arg Glu  
 50 55 60  
 Asp Ser Asp Asp Glu Glu Phe Glu Gly Asp Thr Gly Thr Thr Glu Asn  
 65 70 75 80  
 Lys Asp Pro Ala Glu Val Arg Arg Ala Arg Arg Met Gln Ser Asn Arg  
 85 90 95  
 Glu Ser Ala Arg Arg Ser Arg Arg Arg Lys Gln Glu His Met Ser Glu  
 100 105 110  
 Leu Glu Asn Gln Val Glu His Thr Gly Leu Leu Lys Arg Leu Thr Asp  
 115 120 125  
 Met Asn Gln Lys Tyr Asp Val Ala Ser Val Asp  
 130 135

<210> 910  
 <211> 153  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 910  
 Gly Thr Gly Gly Asn Trp Ile Ala Leu Pro Arg Lys Ala Gly Leu Lys  
 1 5 10 15  
 Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro  
 20 25 30  
 Asp Ile Lys His Gly Gly Phe Thr Glu Glu Glu Asp His Val Ile Cys  
 35 40 45  
 Thr Leu Phe Phe Thr Ile Gly Ser Arg Trp Ser Val Ile Ala Ser Lys  
 50 55 60  
 Leu Pro Gly Arg Thr Asp Asn Asp Val Lys Asn Tyr Trp Asn Thr Lys  
 65 70 75 80  
 Leu Lys Lys Lys Leu Met Lys Gln Leu Ala Ser Leu Lys Thr Val Pro  
 85 90 95  
 Glu Ser Asn Phe Asp Tyr Gln Val Cys Ala Gln Asn Ser Ala Ser Ile  
 100 105 110  
 Asp Pro Glu Thr Lys Asn Arg Glu Tyr Ala Ala Asn Ser Met Gly Phe  
 115 120 125  
 Pro Lys Gln Asn Phe Asn Pro Gly Ile Pro Thr Ser Asn Ser Ser Leu  
 130 135 140  
 Leu Cys Pro Pro Ser Leu Thr Glu Val  
 145 150

<210> 911  
 <211> 118  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 911  
 Thr Ser Cys Ala Asp Asn Cys Arg Leu Ser Leu Ser Leu Ile Gln Ala  
 1 5 10 15  
 Pro Val Phe Ser Ser Ile Leu Ser Lys Lys Leu Leu Cys Phe Phe Ser  
 20 25 30  
 Leu Ser Leu Ser Thr Met Ala Arg Pro Gln Gln Arg Tyr Arg Gly Val  
 35 40 45  
 Arg Gln Arg His Trp Gly Ser Trp Val Ser Glu Ile Arg His Pro Leu  
 50 55 60  
 Leu Lys Thr Arg Ile Trp Leu Gly Thr Phe Glu Thr Ala Glu Asp Ala  
 65 70 75 80  
 Ala Arg Ala Tyr Asp Glu Ala Ala Arg Leu Met Cys Gly Pro Arg Ala  
 85 90 95  
 Arg Thr Asn Phe Pro Tyr Asn Pro Asn Met Ser Gln Ser Leu Arg Arg  
 100 105 110  
 Ser Ser Ser Arg Arg His

115

<210> 912  
 <211> 88  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 912  
 Met Glu Ala Ala Ala Ala Ala Lys Val Val Gly Glu Ala Glu Glu  
 1 5 10 15  
 Leu Pro Lys Thr Ile Val Arg Arg Val Val Lys Glu Lys Leu Ser Arg  
 20 25 30  
 Cys Ser Asp Asp Gly Asp Val Ser Leu His Lys Asp Ala Leu Leu Ala  
 35 40 45  
 Phe Ser Glu Ser Ala Arg Ile Phe Ile His Tyr Leu Ser Ala Thr Ala  
 50 55 60  
 Asn Asp Ile Cys Lys Glu Ser Lys Arg Gln Thr Ile Asn Ala Asp Asp  
 65 70 75 80  
 Val Leu Lys Ala Leu Glu Glu Met  
 85

<210> 913  
 <211> 84  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 913  
 Pro Val His Glu Gln Gly Gln Leu Arg Gly Val Asp Arg Leu Glu Gly  
 1 5 10 15  
 Ser His Trp Val Pro Ile Gly Trp Glu Arg Ile Ser Ala Leu Ala Gln  
 20 25 30  
 Thr Val Gln Val Asp Ala Gly Trp Gly Met Gln Leu Asp Ser Met Asp  
 35 40 45  
 Asp Asp Glu Asp Leu Thr Val Ala Asp Met Glu Thr Pro Tyr Trp Glu  
 50 55 60  
 Arg Pro Ala Gly Pro Ile Trp Trp Cys His Phe Ser Ala Gly His Pro  
 65 70 75 80  
 Ala Val Glu Ala

<210> 914  
 <211> 184  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 914  
 Met Lys Pro Thr Ile Asp Leu Glu Val Glu Ala Val Ser Glu Asn Asp  
 1 5 10 15  
 Ser Glu Ile Ser Ser Gln Val Ala Ser Asn Leu Ser Asn Gln Glu Pro  
 20 25 30  
 Ser Met Gly Pro Ser Asn Asp Ser Leu Ala Asn Ser Ser Tyr Leu Ile  
 35 40 45  
 Ser Pro Ser Ala Val Gly Ser Gly Ser Glu Thr Val Phe Leu Asp Leu  
 50 55 60  
 Ser Leu Gly Cys Ser Asn Asp Glu Ser Ser Gly Arg Asp Ser Val Gly  
 65 70 75 80  
 Val Ala Phe Ser Ser Thr Ser Glu Cys Ser Asn Glu Pro Glu Ser His  
 85 90 95  
 Pro Ala Ala Ala Gly Pro Thr Thr Ser Arg Val Phe Ser Cys Asn Tyr  
 100 105 110  
 Cys Gln Arg Lys Phe Phe Ser Ser Gln Ala Leu Gly Gly His Gln Asn

```

      115      120      125
Ala His Lys Arg Glu Arg Thr Leu Ala Lys Arg Ala Met Arg Met Gly
  130      135      140
Met Phe Ser Ser Gln Arg Tyr Ser Ser Leu Ala Ser Leu Pro Leu His
  145      150      155      160
Gly Ser Pro Thr Val Arg Asp Leu Gly Ile Lys Ala His Ser Ser Val
      165      170      175
His Gln Val His Gln Gly Met Leu
      180

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<210> 915
<211> 96
<212> PRT
<213> Eucalyptus grandis

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      <400> 915
Met Trp Asn Pro Ser Ala Ala Gln Glu Asp Asp Asp Ser Trp Glu Val
  1      5      10      15
Arg Ala Phe Ala Glu Asp Thr Ser Asn Ile Met Gly Ala Thr Trp Pro
      20      25      30
Pro Arg Ser Tyr Thr Cys Ser Phe Cys Arg Arg Glu Phe Arg Ser Ala
      35      40      45
Gln Ala Leu Gly Gly His Met Asn Val His Arg Arg Asp Arg Ala Lys
      50      55      60
Leu His Gln Ser Gln Phe Arg Pro Leu Ala Asn Gln Asn Ser Pro Phe
      65      70      75      80
Ala Ser Cys Ser Ser Pro Ser Ser Ser Thr Leu Leu Phe Pro Asn Gln
      85      90      95

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<210> 916
<211> 176
<212> PRT
<213> Eucalyptus grandis

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      <400> 916
Met Ala Glu Leu Asp Tyr Cys Gln Thr Lys Ser Ser Pro Gly Ala Ala
  1      5      10      15
Ala Thr Arg Leu Lys Leu Phe Gly Phe Asn Val Ser Asp Glu Glu Asp
      20      25      30
Ser Ala Val Ser Asp Pro Ile Thr Val Gly Ala Asn Gly Gly Gly Gly
      35      40      45
Gly Gly Gly Gly Lys Ala Thr Pro Ser Gly Ser Pro Glu Gly Ser Val
      50      55      60
Pro Val Gly Gly Gly Gly Glu Arg Lys Tyr Glu Cys Gln Tyr Cys Cys
      65      70      75      80
Arg Glu Phe Ala Asn Ser Gln Ala Leu Gly Gly His Gln Asn Ala His
      85      90      95
Lys Lys Glu Arg Gln Gln Leu Lys Arg Ala Gln Leu His Ala Ser Arg
      100      105      110
Asn Ala Ala Val Ser Ser Leu Val Arg Asn Pro Ile Ile Ser Ala Phe
      115      120      125
Ala Thr Pro Pro His Leu Leu Ala Thr Val Gly Pro Val Val Val Thr
      130      135      140
Gly Ala Ala Pro Thr Ser Pro Ser Trp Val Tyr Val Pro Arg Gly Ala
      145      150      155      160
Pro Pro Phe Gln Val Ser His Gly Cys Val Phe Thr Thr Gly Gln Gly
      165      170      175

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<210> 917
<211> 138
<212> PRT

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&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 917

Glu His Gln Ser Asn Pro Trp His Gln Ser Ser Ser Ala Ala Asn His  
 1 5 10 15  
 Arg Gln Leu Asn Leu Glu Leu Ala Leu Glu Pro Cys Ser Pro Ser Ser  
 20 25 30  
 Ser Ser Ser Pro Ala Ser Leu His Pro Leu Ala Val Pro Ala Lys Asp  
 35 40 45  
 Asn Lys Leu Tyr Ser Cys Asn Phe Cys Gln Lys Lys Phe Tyr Ser Ser  
 50 55 60  
 Gln Ala Leu Gly Gly His Gln Asn Ala His Lys Leu Glu Arg Thr Leu  
 65 70 75 80  
 Ala Lys Lys Ser Arg Asp Leu Cys Ser Ala Ala Lys Pro Pro Ala Ala  
 85 90 95  
 Thr Ser Asn Gly His His Val Arg Pro Ser Phe Gln Ser Val Val Tyr  
 100 105 110  
 Glu Asn Gln Pro Arg Leu Ala Arg His Val Gly Asp Asp Met Arg Tyr  
 115 120 125  
 Ala Gly Thr Asn Pro Leu Tyr Gly Ser Ser  
 130 135

&lt;210&gt; 918

&lt;211&gt; 68

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 918

Gln Leu Ser Ser Val Asp Arg Glu Ala Arg Val Leu Arg Tyr Arg Glu  
 1 5 10 15  
 Lys Arg Lys Asn Arg Lys Phe Glu Lys Thr Ile Arg Tyr Ala Ser Arg  
 20 25 30  
 Lys Ala Tyr Ala Glu Thr Arg Pro Arg Ile Lys Gly Arg Phe Ala Lys  
 35 40 45  
 Arg Ala Asp Ile Glu Ala Glu Ala Glu Arg Met Phe Gly Phe Gly Val  
 50 55 60  
 Val Pro Ser Phe  
 65

&lt;210&gt; 919

&lt;211&gt; 224

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 919

Arg Gly Pro Trp Thr Val Glu Glu Asp Leu Thr Leu Val Asn Tyr Ile  
 1 5 10 15  
 Ala Asn His Gly Glu Gly Arg Trp Asn Ser Leu Ala Arg Ser Ala Gly  
 20 25 30  
 Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu  
 35 40 45  
 Arg Pro Asp Val Arg Arg Gly Asn Ile Thr Leu Glu Glu Gln Leu Leu  
 50 55 60  
 Ile Leu Glu Leu His Ser Arg Trp Gly Asn Arg Trp Ser Lys Ile Ala  
 65 70 75 80  
 Gln His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg  
 85 90 95  
 Thr Arg Val Gln Lys His Ala Lys Gln Leu Lys Cys Asp Val Asn Ser  
 100 105 110  
 Lys Gln Phe Lys Asp Ala Met Lys Tyr Leu Trp Met Pro Arg Leu Val  
 115 120 125

Glu Arg Ile Gln Ala Ala Ser Ala Ser Val Ser Thr Ala Thr Val Ala  
 130 135 140  
 Ala Ala Ala Met Ala Ala Pro Pro Thr Met Ala Thr Thr Ala Ala Ser  
 145 150 155 160  
 Asn Ile Gly Gly Met Ala Phe Pro Pro Ala Leu Ala Gly Met Gly Gly  
 165 170 175  
 Asp Phe Arg Gly Gly Arg Val Asn Val Ala Pro Ser Tyr Ser Thr Pro  
 180 185 190  
 Glu Asn Ser Cys Thr Thr Ala Ser Ser Asp Ser Phe Gly Ala Gln Val  
 195 200 205  
 Ser Pro Val Ser Asp Leu Thr Asp Leu Asp Arg Val Leu Thr Leu Ser  
 210 215 220

&lt;210&gt; 920

&lt;211&gt; 286

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 920

Met Ser Leu Trp Ala Asp Tyr Asp His Ala Ala Ala Thr Asp Leu Ser  
 1 5 10 15  
 Ala Phe Trp Pro Pro Pro Ala Thr Pro Pro Pro Ala Pro Ala Pro  
 20 25 30  
 Pro Leu Ser Gln Glu Ser Leu Gln Arg Arg Leu Gln Ala Leu Ile Glu  
 35 40 45  
 Gly Ala Arg Gly Arg Asp Gly Glu Glu Gly Ala Gly Gly Pro Ala Ala  
 50 55 60  
 Ala Trp Thr Tyr Thr Ile Phe Trp Gln Ser Ser Gly Asp Tyr Ser Gly  
 65 70 75 80  
 Pro Val Leu Gly Trp Gly Asp Gly Tyr Tyr Lys Gly Asp Gly Arg Ala  
 85 90 95  
 Arg Ser Arg Gly Ser Ala Cys Ser Gln Ala Glu Gln Glu His Arg Lys  
 100 105 110  
 Lys Val Leu Arg Glu Leu Asn Ser Leu Ile Ser Gly Ala Pro Pro Ala  
 115 120 125  
 Asp Asp Ala Val Glu Glu Glu Val Thr Asp Thr Glu Trp Phe Phe Leu  
 130 135 140  
 Val Ser Met Thr Gln Ser Phe Ala Gly Gly Val Gly Leu Pro Gly Arg  
 145 150 155 160  
 Ala Tyr Phe Ser Ser Asn Pro Ala Trp Val Thr Gly Ala Glu Arg Leu  
 165 170 175  
 Gly Asn Cys Gly Cys Asp Arg Ala Arg Gln Ala Gln Ile Phe Gly Leu  
 180 185 190  
 Gln Thr Ile Ala Cys Val Pro Val Leu Asn Gly Val Val Glu Leu Gly  
 195 200 205  
 Ser Thr Glu Pro Ile Tyr Gln Ser Ser Asp Leu Ile Ser Gly Ile Arg  
 210 215 220  
 Gly Leu Phe Asn Phe His Glu Ser Glu Met Gly Cys Gly Gly Arg Val  
 225 230 235 240  
 Leu Asn Ser Glu His Asp Pro Ala Ser Leu Trp Ile Cys Asp Pro Pro  
 245 250 255  
 Val Thr Met Glu Ile Asn Asp Arg Pro Met Thr Phe Gln Ile Glu Asn  
 260 265 270  
 Pro Ser Ser Ser Ser Leu Thr Glu Ser Pro Ser Ala Ile Cys  
 275 280 285

&lt;210&gt; 921

&lt;211&gt; 101

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

<400> 921  
 Met Val Pro Pro Phe Pro Thr Ala Glu Leu Pro Leu Asn Glu Asn Asp  
 1 5 10 15  
 Ser Gln Asp Met Val Ile Tyr His Val Leu Asn Glu Ala Met Ser Gln  
 20 25 30  
 Asn Asn Ser Ser Leu Pro His Pro Asn Gln Ser Gly Ser Pro Ser Ser  
 35 40 45  
 Gly Gly Ser Leu Glu Pro Ser Arg Gly Ile Thr Lys Lys His Tyr Arg  
 50 55 60  
 Gly Val Arg Arg Arg Pro Trp Gly Lys Phe Ala Val Arg Phe Ala Thr  
 65 70 75 80  
 Arg Tyr Ala Thr Gly Pro Glu Phe Gly Ser Gly His Ser Arg Gln Pro  
 85 90 95  
 Arg Arg Arg Arg Trp  
 100

<210> 922  
 <211> 139  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 922  
 Ile Gly Tyr Pro Lys Met Pro Leu Gln Ala Ser Ile Ser Thr Gln Ser  
 1 5 10 15  
 Asp Phe Gln Ala Asp Gly Ser Gly His Gly Val Pro Ile Pro Gln Gly  
 20 25 30  
 Ala Asp Ser Gly Ser Leu Gly Ile Ser Ala Leu Pro Thr Ile Gln Arg  
 35 40 45  
 Asp Ser Gly Val His Val Lys Gln Thr Thr Ser Glu Ser Ser Arg Glu  
 50 55 60  
 Asp Ser Asp Asp Glu Glu Phe Glu Gly Asp Thr Gly Thr Thr Glu Asn  
 65 70 75 80  
 Lys Asp Pro Ala Glu Val Arg Arg Ala Arg Arg Met Gln Ser Asn Arg  
 85 90 95  
 Glu Ser Ala Arg Arg Ser Arg Arg Arg Lys Gln Glu His Met Ser Glu  
 100 105 110  
 Leu Glu Asn Gln Val Glu His Thr Gly Leu Leu Lys Arg Leu Thr Asp  
 115 120 125  
 Met Asn Gln Lys Tyr Asp Val Ala Ser Val Asp  
 130 135

<210> 923  
 <211> 222  
 <212> PRT  
 <213> Pinus radiata

<400> 923  
 Met Gly Gln Gln Ser Leu Ile Tyr Ser Phe Val Ala Arg Gly Thr Val  
 1 5 10 15  
 Val Leu Ala Glu Tyr Thr Glu Phe Lys Gly Asn Phe Thr Gly Ile Ala  
 20 25 30  
 Ala Gln Cys Leu Gln Lys Leu Pro Ala Ser Asn Asn Lys Phe Thr Tyr  
 35 40 45  
 Asn Cys Asp Asn His Thr Phe Asn Tyr Leu Val Glu Asp Gly Phe Ala  
 50 55 60  
 Tyr Cys Val Val Ala Asp Glu Ser Val Gly Arg Gln Val Pro Met Ala  
 65 70 75 80  
 Phe Leu Glu Arg Val Lys Glu Asp Phe Lys Arg Arg Tyr Gly Gly Gly  
 85 90 95  
 Arg Ala Asp Thr Ala Val Ala Asn Ser Leu Asn Arg Asp Phe Gly Ser  
 100 105 110

Lys Leu Lys Glu His Met Gln Tyr Cys Ile Asp His Pro Glu Glu Ile  
           115                          120                          125  
 Ser Lys Leu Ala Lys Val Lys Ala Gln Val Ser Glu Val Lys Gly Val  
       130                          135                          140  
 Met Met Asp Asn Ile Glu Lys Val Leu Asp Arg Gly Glu Lys Ile Glu  
 145                          150                          155                          160  
 Leu Leu Val Asp Lys Thr Glu Asn Leu Arg Phe Gln Ala Gln Asp Phe  
                           165                          170                          175  
 Gln Lys Lys Gly Thr Glu Leu Arg Arg Lys Met Trp Phe Gln Asn Met  
                           180                          185                          190  
 Lys Val Lys Leu Ile Val Leu Gly Ile Val Val Ala Leu Ile Leu Ile  
           195                          200                          205  
 Ile Val Leu Ser Val Cys His Gly Phe Asn Cys Ser Lys Lys  
       210                          215                          220

<210> 924  
 <211> 105  
 <212> PRT  
 <213> Pinus radiata

<400> 924  
 Met Gly Arg Gly Lys Ile Glu Ile Lys Met Ile Glu Asn Thr Ala Asn  
   1                          5                          10                          15  
 Arg Gln Val Thr Phe Ser Lys Arg Lys Gly Gly Leu Leu Lys Lys Ala  
           20                          25                          30  
 His Glu Leu Ser Val Leu Cys Asn Ala Glu Ile Ala Leu Ile Val Phe  
       35                          40                          45  
 Ser Asn Thr Gly Lys Leu His Asp Trp Ser Ser Ser Ser Met Lys Lys  
       50                          55                          60  
 Val Met Glu Lys Tyr Gln Lys Ser Asp Gln Gly Leu Gly Leu Met Asp  
 65                          70                          75                          80  
 Tyr Gln Gln Gln Gln Leu Leu Cys Glu Met Lys Arg Ile Thr Lys Glu  
                           85                          90                          95  
 Asn Glu Ser Leu Arg Ala Arg Leu Arg  
           100                          105

<210> 925  
 <211> 102  
 <212> PRT  
 <213> Pinus radiata

<400> 925  
 Val Pro Ser Pro Leu Val Pro Thr Arg Glu Asn Tyr Phe Val Arg Tyr  
   1                          5                          10                          15  
 Cys Lys Gln His Ser Asp Gly Ile Trp Ala Val Val Asp Val Ser Leu  
           20                          25                          30  
 Asp Thr Leu Arg Gly Asn Pro Gln Pro His Pro Asn Cys Pro Pro Ser  
       35                          40                          45  
 Thr Leu Arg Cys Arg Arg Arg Pro Ser Gly Cys Leu Ile Gln Glu Met  
       50                          55                          60  
 Pro Asn Gly Tyr Ser Lys Val Thr Trp Val Glu His Val Glu Val Asp  
 65                          70                          75                          80  
 Glu Arg Ala Val His Arg Ile Tyr Asp Lys Leu Val Ser Thr Val Ser  
                           85                          90                          95  
 Arg Arg Thr Pro Tyr Arg  
           100

<210> 926  
 <211> 176  
 <212> PRT  
 <213> Pinus radiata

<400> 926  
 Leu Ser Asn Ile Glu Pro Lys Gln Ile Lys Val Trp Phe Gln Asn Arg  
 1 5 10 15  
 Arg Cys Arg Glu Lys Gln Arg Lys Glu Ala Ser Arg Leu Gln Thr Val  
 20 25 30  
 Asn Arg Lys Leu Thr Ala Met Asn Lys Leu Leu Met Glu Glu Asn Asp  
 35 40 45  
 Arg Leu Gln Lys Gln Val Ser Gln Leu Val Tyr Glu Asn Gly Tyr Met  
 50 55 60  
 Arg Gln Gln Leu Gln Asn Ala Ser Val Ala Ala Thr Asp Thr Ser Cys  
 65 70 75 80  
 Glu Ser Val Val Thr Ser Gly Gln His Gln His Asn Pro Thr Pro Gln  
 85 90 95  
 His Pro Pro Arg Asp Ala Ser Pro Ala Gly Leu Leu Ser Ile Ala Glu  
 100 105 110  
 Glu Thr Leu Thr Glu Phe Leu Ser Lys Ala Lys Gly Ala Ala Val Asp  
 115 120 125  
 Trp Val Gln Met Pro Gly Met Lys Pro Gly Pro Asp Ser Ile Gly Ile  
 130 135 140  
 Val Ala Ile Ser Asn Thr Cys Asn Gly Val Ala Ala Arg Ala Cys Gly  
 145 150 155 160  
 Leu Val Gly Leu Asp Pro Thr Lys Val Ala Glu Ile Leu Lys Asp Arg  
 165 170 175

<210> 927  
 <211> 68  
 <212> PRT  
 <213> Pinus radiata

<400> 927  
 Ile Leu Pro Glu Gly Pro Pro Glu Ser Arg Ser Val Ile Asp Asn Arg  
 1 5 10 15  
 Gln Val Glu Gly Ser Ile Leu Thr Ile Ala Phe Gln Ile Leu Val Asn  
 20 25 30  
 Asp Leu Pro Ser Ala Lys Leu Thr Leu Glu Ser Val Glu Thr Val Asn  
 35 40 45  
 Asn Leu Ile Ser Cys Thr Ala Gln Arg Ile Lys Ala Ala Leu His Lys  
 50 55 60  
 Val Glu Asp Val  
 65

<210> 928  
 <211> 68  
 <212> PRT  
 <213> Pinus radiata

<400> 928  
 Met Gly Arg Ala Leu Gly Arg Thr Glu Ile Lys Arg Ile Glu Asn Glu  
 1 5 10 15  
 Val Ser Arg Asn Val Ser Phe Arg Lys Arg Arg Arg Gly Leu Leu Lys  
 20 25 30  
 Lys Ala Ala Glu Leu Ser Ile Leu Cys Asp Ala Thr Val Gly Val Val  
 35 40 45  
 Val Phe Ser Pro Ala Gly Lys Leu Ser Glu Tyr Ala Ser Thr Ser Glu  
 50 55 60  
 Ser Asn Gly Tyr  
 65

<210> 929  
 <211> 126



&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 929

Ile	Arg	Asn	Pro	Thr	Asn	Arg	His	Ser	Ser	Phe	Tyr	Lys	Arg	Lys	Gly
1				5					10					15	
Gly	Leu	Leu	Lys	Lys	Ala	Phe	Glu	Leu	Ala	Val	Leu	Cys	Asp	Ala	Glu
			20				25						30		
Val	Ala	Leu	Ile	Ile	Phe	Ser	Glu	Thr	Gly	Arg	Ile	Tyr	Glu	Phe	Ala
		35					40					45			
Ser	His	Asp	Asp	Val	Thr	Thr	Val	Leu	Ala	Lys	Tyr	Arg	Ile	Gln	Thr
	50					55					60				
Lys	Thr	Ala	Gly	Asn	Ala	Met	Pro	Ser	Ser	Leu	Gln	Lys	Thr	Glu	Phe
65					70					75					80
Asp	Gln	Leu	Gln	Val	Arg	Met	Leu	Gln	Glu	Lys	Ile	Asp	Asn	Leu	Glu
				85					90					95	
Lys	Thr	Lys	Lys	His	Met	Val	Gly	Glu	Asn	Leu	Glu	Ser	Leu	Thr	Trp
			100				105						110		
Lys	Glu	Leu	Gln	Gln	Val	Glu	Lys	Leu	Ser	Lys	Ala	Thr			
		115					120					125			

&lt;210&gt; 930

&lt;211&gt; 90

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 930

Leu	Phe	His	Pro	Ala	Arg	Ile	Gly	Gly	Phe	Gly	Gly	Gly	Gln	Val	Ile
1				5					10					15	
Leu	Pro	Leu	Ala	His	Thr	Val	Glu	His	Glu	Glu	Phe	Leu	Glu	Val	Ile
			20				25						30		
Lys	Leu	Glu	Asn	His	Gly	Leu	Thr	Gln	Glu	Glu	Ala	Leu	Leu	Ser	Arg
		35					40					45			
Asp	Met	Phe	Leu	Leu	Gln	Leu	Cys	Ser	Gly	Leu	Asp	Glu	Asn	Ala	Val
	50					55					60				
Gly	Ala	Cys	Ala	Glu	Leu	Val	Phe	Ala	Pro	Ile	Asp	Ala	Ser	Leu	Ala
65					70					75					80
Asp	Ser	Ser	Pro	Leu	Leu	Pro	Ser	Gly	Phe						
				85					90						

&lt;210&gt; 931

&lt;211&gt; 138

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 931

Met	Gly	Arg	Gly	Arg	Val	Gln	Leu	Arg	Arg	Ile	Glu	Asn	Lys	Ile	Asn
1					5				10					15	
Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Arg	Asn	Gly	Leu	Leu	Lys	Lys	Ala
			20				25						30		
Tyr	Glu	Leu	Ser	Val	Leu	Cys	Asp	Ala	Glu	Val	Ala	Leu	Ile	Ile	Phe
		35					40					45			
Ser	Thr	Arg	Gly	Lys	Leu	Tyr	Glu	Phe	Ala	Ser	Ser	Ser	Met	Asn	Lys
	50					55					60				
Thr	Leu	Glu	Arg	Tyr	Glu	Lys	Cys	Ser	Tyr	Ala	Met	Gln	Asp	Thr	Thr
65					70					75					80
Gly	Val	Ser	Asp	Arg	Glu	Ala	Gln	Asn	Trp	His	Gln	Glu	Val	Thr	Lys
				85					90					95	
Leu	Lys	Gly	Lys	Val	Glu	Leu	Leu	Gln	Arg	Ser	Gln	Arg	His	Leu	Leu
			100					105					110		
Gly	Glu	Asp	Leu	Gly	Pro	Leu	Asn	Val	Lys	Glu	Leu	Gln	Gln	Leu	Glu

115 120 125  
 Arg Gln Leu Glu Val Ala Leu Thr His Leu  
 130 135

<210> 932  
 <211> 161  
 <212> PRT  
 <213> Pinus radiata

<400> 932  
 Met Gly Gln Gln Ser Leu Ile Tyr Ser Phe Val Ala Arg Gly Thr Val  
 1 5 10 15  
 Val Leu Ala Glu Tyr Thr Gln Phe Thr Gly Asn Phe Thr Thr Ile Ala  
 20 25 30  
 Asn Gln Cys Leu Gln Lys Ile Pro Ala Ser Asn Asn Lys Phe Thr Tyr  
 35 40 45  
 Asn Cys Asp Arg His Thr Phe Asn Tyr Leu Val Glu Asp Gly Tyr Thr  
 50 55 60  
 Tyr Cys Val Val Ala Asp Glu Ser Val Gly Arg Gln Leu Pro Ile Ala  
 65 70 75 80  
 Phe Leu Glu Arg Ile Lys Asp Asp Phe Lys Lys Arg Tyr Gly Gly Gly  
 85 90 95  
 Lys Ala Asp Thr Ala Val Ala His Ser Leu Asn Lys Asp Phe Gly Pro  
 100 105 110  
 Lys Leu Lys Asp His Met Gln Tyr Cys Val Asp His Pro Glu Glu Ile  
 115 120 125  
 Asn Lys Leu Ala Lys Val Lys Ala Gln Val Ser Glu Val Lys Gly Val  
 130 135 140  
 Met Met Glu Asn Ile Glu Lys Val Leu Asp Arg Gly Glu Lys Ile Glu  
 145 150 155 160  
 Leu

<210> 933  
 <211> 54  
 <212> PRT  
 <213> Pinus radiata

<400> 933  
 Phe Pro Thr Gly Asn Gly Gly Thr Ile Glu Leu Leu Tyr Met His Thr  
 1 5 10 15  
 Tyr Ala Ala Thr Thr Leu Ala Ser Ala Arg Asp Phe Trp Thr Leu Arg  
 20 25 30  
 Tyr Thr Thr Val Leu Glu Tyr Gly Ser Leu Val Val Cys Glu Arg Ser  
 35 40 45  
 Leu Ser Gly Thr Gln Gly  
 50

<210> 934  
 <211> 123  
 <212> PRT  
 <213> Pinus radiata

<400> 934  
 Arg Arg Glu Ala Cys Cys Pro Gln Pro Ser Leu Met Ala Arg Ala Pro  
 1 5 10 15  
 His His His Gln Gln Gln Gln His His Gln His Gln Gln Glu Ala  
 20 25 30  
 Ser Arg Met Val Thr Ser Leu Glu Val Asp Ile Asp Thr Ala Cys Ser  
 35 40 45  
 Ser Lys Pro Asn Asp Ser Ile Asp Ala Leu Lys Ser Lys Ile Ala Cys

50	55	60
His Pro His Tyr Pro Gln Leu Leu Ala Ala Tyr Met Asp Cys Gln Lys		
65	70	75
Val Gly Ala Pro Pro Glu Val Val Thr Val Leu Asp Glu Ile Ile Gln		80
	85	90
Glu Asn Gln Leu Gly Arg His Ser Gly Thr Met Asp Ile Gly Val Asp		95
	100	105
Pro Glu Leu Asp Gln Phe Met Glu Ala Tyr Cys		110
115	120	

<210> 935  
 <211> 113  
 <212> PRT  
 <213> Pinus radiata

<400> 935
Met Gly Arg Gly Lys Ile Glu Ile Lys Lys Ile Asp Asp Val Thr Ser
1 5 10 15
Arg Gln Val Thr Phe Ser Lys Arg Lys Met Gly Ile Phe Lys Lys Ala
20 25 30
His Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Val Leu Ile Phe
35 40 45
Ser Asn Thr Gly Arg Leu Tyr Asp Tyr Ala Ser Ser Arg Cys Met Glu
50 55 60
Arg Thr Ile Glu Arg Tyr Glu Lys Cys Thr Lys Ala Ile Asn Cys Pro
65 70 75 80
Thr Ser Asp Pro Ile Val Glu Asn Lys Ser Pro Ile Gln Glu Gly Ile
85 90 95
Glu Ile Leu Arg Gln Lys Leu Arg Ala Leu Gln Arg Leu Gln Arg Asn
100 105 110
Leu

<210> 936  
 <211> 162  
 <212> PRT  
 <213> Pinus radiata

<400> 936
Val Gln Glu Val Ala His Ile Ala Asn Gly Ser His Pro Gly Asn Cys
1 5 10 15
Ile Ser Leu Leu Arg Val Asn Ala Cys Ser Thr Ser Gln Asn Val Glu
20 25 30
Leu Ile Leu Gln Glu Ser Cys Thr Asp Ala Ser Gly Ser Val Ile Val
35 40 45
Tyr Ala Pro Val Asp Val Pro Ala Ile Asn Ile Ala Met Ser Gly Glu
50 55 60
Asp Pro Ser Tyr Ile Ala Leu Leu Pro Ser Gly Phe Ala Ile Leu Pro
65 70 75 80
Asp Gly Gln Asn Arg Ser Ser Thr Ser Ser Leu Leu Glu Gly Ala Asn
85 90 95
Ser Ser Ser Asn Ser Ser Asn Ser Ser Gly Leu Asp Ser Pro Leu Thr
100 105 110
Arg Gly Gly Ser Leu Leu Thr Val Ala Phe Gln Val Leu Val Ser His
115 120 125
Leu Pro Thr Ala Lys Leu Gly Leu Asp Ser Val Thr Thr Ile Asn Asn
130 135 140
Leu Ile Cys Asn Thr Val Gln Gln Ile Lys Ser Ala Leu His Cys Ala
145 150 155 160
Asp Val

<210> 937  
 <211> 114  
 <212> PRT  
 <213> Pinus radiata

<400> 937  
 Asn Arg Arg Ala Arg Thr Lys Trp Lys Arg Asn Glu Val Glu Cys Asp  
 1 5 10 15  
 Asn Leu Lys Arg Cys Cys Glu Ser Leu Arg Glu Glu Asn Arg Arg Leu  
 20 25 30  
 Glu Lys Glu Val Gln Ser Leu Arg Ala Met Lys Val Pro Gln Ser Pro  
 35 40 45  
 Asn Ser Met Pro Leu Ala Ala Ala Thr Leu Ala Met Cys Pro Ala Cys  
 50 55 60  
 Glu Gly Leu Ala Ile Lys Asn Arg Gly Ala Ala Thr Ser Ser Thr Ala  
 65 70 75 80  
 Lys Ser Gln Gln Ser Leu Leu Thr Ile Met Gly Ile Gly Asp Val Asn  
 85 90 95  
 Met Ile Ser Lys Asn Asn Gln Thr Pro Ser Met Gly Met Gly Asp Glu  
 100 105 110  
 Met Asn

<210> 938  
 <211> 120  
 <212> PRT  
 <213> Pinus radiata

<400> 938  
 Met Leu Lys Thr Leu Glu Arg Tyr Gln Lys Cys Ser Tyr Val Leu Gln  
 1 5 10 15  
 Asp Ala Thr Val Ser Asp Arg Glu Ala Gln Asn Trp His Gln Glu Val  
 20 25 30  
 Gly Lys Leu Lys Ala Lys Val Glu Leu Leu Gln Arg Ser Gln Arg His  
 35 40 45  
 Leu Leu Gly Glu Asp Leu Gly Pro Leu Ser Ile Lys Glu Leu Gln Gln  
 50 55 60  
 Leu Glu Arg Gln Leu Glu Val Ala Leu Thr His Val Arg Ser Arg Lys  
 65 70 75 80  
 Thr Gln Val Met Leu Glu Met Met Asp Glu Leu Arg Arg Lys Glu Arg  
 85 90 95  
 Ile Leu Gln Glu Val Asn Lys Ser Leu Arg Lys Lys Leu Gln Glu Ala  
 100 105 110  
 Glu Gly Gln Ala Phe Asn Ala Met  
 115 120

<210> 939  
 <211> 110  
 <212> PRT  
 <213> Pinus radiata

<400> 939  
 Ser Asp Thr Ala Asn Ser Ser Glu Leu Leu Gly Ser Ser Arg Ser Asp  
 1 5 10 15  
 Gly Asp His Pro His His Gly His His Asp Gln Gln Gln Gln Gln  
 20 25 30  
 Glu Asn His Met Val Trp Gln Asn Ser Arg Leu Lys Ala Asp Val Leu  
 35 40 45  
 Gln His Pro Leu Tyr Asp Gln Leu Leu Ala Ala His Val Ala Cys Leu  
 50 55 60

Arg Ile Ala Thr Pro Val Asp Gln Leu Pro Lys Ile Asp Ala Gln Leu  
 65 70 75 80  
 Ala Gln Gln His His Val Val Ala Lys Tyr Ser Val Leu Gly Arg Asn  
 85 90 95  
 Gln Leu Leu Thr Gly Glu Glu Lys Glu Glu Leu Asp Arg Phe  
 100 105 110

<210> 940  
 <211> 86  
 <212> PRT  
 <213> Pinus radiata

<400> 940  
 Arg Asn Tyr Leu Gly Glu Tyr Thr Gly Glu Leu Ile Ser His Arg Glu  
 1 5 10 15  
 Ala Asp Lys Arg Gly Lys Ile Tyr Asp Arg Glu Asp Ser Ser Phe Leu  
 20 25 30  
 Phe Asn Leu Asn Asp Gln Tyr Val Leu Asp Ala Tyr Arg Lys Gly Asp  
 35 40 45  
 Lys Leu Lys Phe Ala Asn His Ser Pro Thr Pro Asn Cys Tyr Ala Lys  
 50 55 60  
 Val Ile Met Val Ala Gly Asp His Arg Val Gly Ile Phe Ala Lys Glu  
 65 70 75 80  
 Arg Ile Ala Ala Gly Glu  
 85

<210> 941  
 <211> 128  
 <212> PRT  
 <213> Pinus radiata

<400> 941  
 Met Gly Arg Gly Lys Ile Glu Ile Lys Met Ile Glu Asn Ala Thr Asn  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Gly Gly Leu Lys Lys Ala  
 20 25 30  
 Gln Glu Leu Ser Val Leu Cys Asn Ala Glu Val Ala Leu Ile Ile Phe  
 35 40 45  
 Ser Ser Thr Gly Lys Leu His Glu Trp Ser Ser Ser Ser Ser Phe Phe  
 50 55 60  
 Met Leu Gln Lys Ser Met Lys Lys Ile Leu Glu Arg Tyr Gln Lys Ser  
 65 70 75 80  
 Glu Gln Gly Leu Gly Leu Met Asp Tyr Gln His Gln Gln Leu Leu Cys  
 85 90 95  
 Glu Met Arg Arg Ile Thr Lys Glu Asn Glu Ser Leu Gln Glu Arg Leu  
 100 105 110  
 Arg His Met Asn Gly Glu Glu Val Asn Ser Leu Lys Leu Pro Glu Leu  
 115 120 125

<210> 942  
 <211> 86  
 <212> PRT  
 <213> Pinus radiata

<400> 942  
 Ala Ile Cys Ser Ile Ser Phe His Pro Tyr Pro Lys Asp Ala Asp Lys  
 1 5 10 15  
 His Leu Leu Ala Arg Gln Thr Gly Leu Thr Arg Ser Gln Val Ser Asn  
 20 25 30  
 Trp Phe Ile Asn Ala Arg Val Arg Leu Trp Lys Pro Met Val Glu Glu  
 35 40 45

Met Tyr Met Glu Glu Leu Arg Glu Ala Glu Thr Gln Asn His Ala Ala  
 50 55 60  
 Asp Ser Lys Val Thr Thr Glu Ser Gly Gln Asn Asn Glu Glu Thr Val  
 65 70 75 80  
 Ser Lys Glu Gly Ala Gly  
 85

<210> 943  
 <211> 58  
 <212> PRT  
 <213> Pinus radiata

<400> 943  
 Gly Ala Gly Tyr Ser Ser Val Ser Gly Ile Asp Glu His Ala Ala Gly  
 1 5 10 15  
 Phe Cys Ser Gln Leu Val Phe Ala Pro Ile Asp Ala Ser Phe Ala Asp  
 20 25 30  
 Asp Ala Pro Leu Ala Ala Leu Trp Phe Pro Ser Asn Ser Ser Arg Ile  
 35 40 45  
 Trp Ile Arg Met Phe Leu Leu Gln Asn Gly  
 50 55

<210> 944  
 <211> 112  
 <212> PRT  
 <213> Pinus radiata

<400> 944  
 Asp Gly Gly Gly Arg Gly Ala Gly His Phe Val Met Glu Gln Phe Ile  
 1 5 10 15  
 Pro Glu Gln Ala Val Ile Ser Asp Ser Ser Ile Ser Ser Val Lys Thr  
 20 25 30  
 Glu Val Cys Ser Gly Ser Gly Gly Gln Phe Glu Leu Ile Arg Arg Lys  
 35 40 45  
 Glu Glu Gly Arg Cys Gly Arg Ala Tyr Ala Glu Pro Ser Phe Val Val  
 50 55 60  
 Thr Pro Leu Val Thr Ser Leu Pro Pro Gln Gln Gln Glu Gly Arg Met  
 65 70 75 80  
 Val Thr Ser Leu Ala Val Asp Met Asp Ser Ser Cys Ser Cys Lys Pro  
 85 90 95  
 Asn Glu Ala Asp Ala Met Arg Ala Lys Leu Phe Ala His Val His Tyr  
 100 105 110

<210> 945  
 <211> 134  
 <212> PRT  
 <213> Pinus radiata

<400> 945  
 Ala Arg Gly Lys Thr Gln Met Arg Lys Ile Glu Ser Ala Thr Ser Arg  
 1 5 10 15  
 Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Met Lys Lys Ala Tyr  
 20 25 30  
 Glu Leu Ser Val Leu Cys Asp Ala Gln Leu Gly Leu Ile Val Phe Ser  
 35 40 45  
 Pro Arg Gly Lys Val Tyr Glu Phe Ser Ser Thr Cys Met Gln Lys Met  
 50 55 60  
 Leu Ala Arg Tyr Glu Lys Cys Ser Glu Gly Ser Asp Thr Ser Thr Ser  
 65 70 75 80  
 Lys Glu Gln Asp Val Gln Cys Leu Lys Arg Glu Ser Ala Asn Met Glu  
 85 90 95

Glu Arg Ile Glu Ile Leu Glu Ser Met Gln Arg Lys Met Leu Gly Glu  
                   100                  105                  110  
 Glu Leu Ala Ser Cys Ala Leu Lys Asp Leu Asn Gln Leu Glu Ser Gln  
                   115                  120                  125  
 Val Glu Arg Gly Leu Arg  
                   130

<210> 946  
 <211> 110  
 <212> PRT  
 <213> Pinus radiata

<400> 946  
 Ser Leu Val Trp Gly Ala Leu Lys Met Gly Lys Thr Lys Met Glu Ile  
   1                  5                  10                  15  
 Lys Arg Ile Gln Asn Pro Ser Arg Arg Gln Val Thr Phe Ser Lys Arg  
                   20                  25                  30  
 Lys Asn Gly Leu Leu Lys Lys Ala Phe Glu Leu Ser Val Leu Cys Asp  
                   35                  40                  45  
 Ala Glu Val Ala Leu Ile Ile Phe Ser Glu Thr Gly Lys Ile Cys Glu  
                   50                  55                  60  
 Phe Ala Ser His Asp Asp Met Ala Thr Ile Leu Glu Lys Tyr Arg Ile  
 65                  70                  75                  80  
 Tyr Thr Glu Thr His Gly Asn Met Glu Ser Ser Ser Val Gln Ser Val  
                   85                  90                  95  
 Lys Ile Gly Glu Ser Gln Leu Lys Ala Leu Arg Glu Lys Met  
                   100                  105                  110

<210> 947  
 <211> 92  
 <212> PRT  
 <213> Pinus radiata

<400> 947  
 Lys Leu Pro Lys Glu Ala Arg Gln Lys Leu Leu Asp Trp Trp Thr Arg  
   1                  5                  10                  15  
 Asn Tyr Lys Trp Pro Tyr Pro Ser Glu Ser Gln Lys Ile Ala Leu Ala  
                   20                  25                  30  
 Glu Ser Thr Gly Leu Asp Gln Lys Gln Ile Asn Asn Trp Phe Ile Asn  
                   35                  40                  45  
 Gln Arg Lys Arg His Trp Lys Pro Ser Glu Glu Met Gln Phe Val Val  
                   50                  55                  60  
 Met Asp Ser Pro Asn Pro His Asn Ala Ala Phe Phe Leu Glu Gly His  
 65                  70                  75                  80  
 Leu Arg Thr Asp Gly Thr Ala Phe Ser Met Asp Cys  
                   85                  90

<210> 948  
 <211> 155  
 <212> PRT  
 <213> Pinus radiata

<400> 948  
 Phe Ser Cys Val Ser Lys Ala Ala Met Ile Leu Ala Glu His Ser Glu  
   1                  5                  10                  15  
 Gly Asp Ala Glu Leu Glu Glu Val Ala Gly Glu Cys Leu Glu Arg Val  
                   20                  25                  30  
 Pro Pro Leu His Ser Arg Phe Thr His Thr Thr Lys Arg Lys Met Tyr  
                   35                  40                  45  
 Ser Phe Leu Met Asp Gly Pro Phe Val Tyr Cys Ala Ile Val Asp Glu  
                   50                  55                  60

Ala Leu Gly Lys Pro Gln Val Phe Val Phe Leu Glu His Val Arg Asp  
65 70 75 80  
Glu Phe Lys Lys Leu Leu Lys Asn Arg Gly Cys Glu Gly Leu Ser Ser  
85 90 95  
Cys Cys Phe Asp Lys Glu Phe Gly Pro Val Tyr Lys Arg Leu Val Ala  
100 105 110  
Pro Leu Val Gly Val Pro Gln Ile Glu Lys Asp Arg Leu Met Glu Glu  
115 120 125  
Glu Ser Lys Ser Gln Pro Ala Lys Thr His Pro Val Gln Val Asn Asn  
130 135 140  
Ser Pro Lys Asp Ser Leu Pro Val Tyr Asp Asn  
145 150 155

<210> 949  
<211> 165  
<212> PRT  
<213> Pinus radiata

<400> 949  
Asp Gly Ser Leu Val Ile Cys Glu Arg Ser Leu Ser Ala Ala Gln Gly  
1 5 10 15  
Met Pro Met Val Ser Gln Ser Gln Ser Phe Val His Gly Glu Leu Leu  
20 25 30  
Ser Ser Gly Tyr Leu Ile Arg Pro Cys Glu Gly Arg Gly Ala Leu Val  
35 40 45  
Ile Met Val Asp His Arg Asn Leu Glu Ala Ser Ser Val Pro Glu Ala  
50 55 60  
Leu Arg Pro Leu Tyr Glu Ser Ser Thr Phe Phe Ala Gln Lys Met Thr  
65 70 75 80  
Val Glu Ala Ser Tyr His Leu Gln Gly Lys Val Gln Pro Glu Met Ile  
85 90 95  
Ser Leu Ser Lys Lys Leu Gln Gln Pro Cys Asn Val Arg Ser Tyr Ser  
100 105 110  
Gln Arg Leu Cys Arg Gly Phe Asn Glu Ala Val Asn Thr Leu Pro Asp  
115 120 125  
Asp Gly Trp Met Ser Leu Ser Lys Asp Gly Leu Gly Asp Val Thr Ile  
130 135 140  
Cys Glu Ser Phe Val Lys Leu Pro Glu Pro Asn Ala Ser Gln Ile Ala  
145 150 155 160  
Tyr Val Asn Ser Met  
165

<210> 950  
<211> 153  
<212> PRT  
<213> Pinus radiata

<400> 950  
Arg Ala Leu Gln Gln Leu Gly Met Ile Gln Gln His Ala Trp Arg Pro  
1 5 10 15  
Gln Arg Gly Leu Pro Glu Arg Ser Val Ser Val Leu Arg Ala Trp Leu  
20 25 30  
Phe Glu His Phe Leu His Pro Tyr Pro Lys Asp Ala Asp Lys His Met  
35 40 45  
Leu Ala Arg Gln Thr Gly Leu Thr Arg Asn Gln Val Ser Asn Trp Phe  
50 55 60  
Ile Asn Ala Arg Val Arg Leu Trp Lys Pro Met Val Glu Glu Met Tyr  
65 70 75 80  
Val Glu Glu Thr Lys Glu Ala Glu Val Asp His Gly Ser Asn Asp Lys  
85 90 95  
Thr Gly Lys Glu Ser Gly Glu Lys Lys Glu Asp Ala Leu Ser Lys Glu



100 105 110  
 Gly Ala Ala Gly Asn Asn Gly Asn Ile His Glu Gln Gln Ser Gly Lys  
 115 120 125  
 Ile Ser Lys Leu Asp Asn Ile Ala Gln Asp Gly Gly Ala Asp Glu Lys  
 130 135 140  
 Pro Ala Gly Val Pro Lys Ser Glu Asn  
 145 150

<210> 951  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

<400> 951  
 Met Asn Leu Met Glu Ser Phe Glu Ala Lys Gly Lys Gly Glu Lys Arg  
 1 5 10 15  
 Arg Thr Val Arg Gly Lys Thr Gln Leu Lys Arg Ile Glu Asn Gly Thr  
 20 25 30  
 Ser Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Lys Lys  
 35 40 45  
 Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val  
 50 55 60  
 Phe Ser Pro Arg Gly Lys Leu Tyr Glu Phe Ala Asn Pro Ser Met Gln  
 65 70 75 80  
 Lys Met Leu Glu Arg Tyr Glu Lys Cys Ser Glu Gly Ser Asn Pro Thr  
 85 90 95  
 Ser Thr Ala Lys Glu Gln Asp Val Gln Cys Leu  
 100 105

<210> 952  
 <211> 217  
 <212> PRT  
 <213> Pinus radiata

<400> 952  
 Met Val Arg Gly Lys Thr Gln Met Lys Arg Ile Glu Asn Asp Thr Ser  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
 20 25 30  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Ile Ile Phe  
 35 40 45  
 Ser Pro Arg Gly Lys Leu Tyr Glu Phe Ala Ser Pro Ser Met Glu Glu  
 50 55 60  
 Ile Leu Glu Lys Tyr Lys Lys Arg Ser Lys Glu Asn Gly Met Ala Gln  
 65 70 75 80  
 Thr Thr Lys Glu Gln Asp Thr Gln Tyr Ser Lys His Ser Lys Gln Lys  
 85 90 95  
 Leu Ala Asn Met Glu Glu Gln Ile Arg Ile Leu Glu Ser Thr Gln Arg  
 100 105 110  
 Lys Met Leu Gly Glu Gly Leu Glu Ser Cys Ser Met Ala Glu Leu Asn  
 115 120 125  
 Lys Leu Glu Ser Gln Ala Glu Arg Gly Leu Ser His Ile Arg Ala Arg  
 130 135 140  
 Lys Thr Glu Ile Leu Val Asp Gln Ile Glu Cys Leu Lys Arg Lys Glu  
 145 150 155 160  
 Arg Leu Leu Ser Glu Glu Asn Ala Leu Leu Ser Arg Lys Trp Val Asp  
 165 170 175  
 Arg Gln Ser Val Asp Gly Ser Gly Ser Thr Ser Ser Ser Ile Gly Leu  
 180 185 190  
 Gly Ser Ile Glu Gln Ile Glu Val Glu Thr Gln Leu Val Ile Arg Pro  
 195 200 205

Pro Asn Ala Gln Asp His Cys Ser Val  
210 215

<210> 953  
<211> 183  
<212> PRT  
<213> Pinus radiata

<400> 953  
Met Glu Ser Glu Glu Asp Lys Ile Ser Pro Glu Asn Lys Lys Arg Arg  
1 5 10 15  
Leu Lys Thr Pro Gln Gln Val Glu Gly Leu Glu Ser Phe Tyr Ala Glu  
20 25 30  
His Lys Tyr Pro Ser Glu Ala Met Lys Ser Gln Leu Ser Glu Glu Leu  
35 40 45  
Gly Leu Thr Glu Lys Gln Val Gln Gly Trp Phe Cys His Arg Arg Leu  
50 55 60  
Lys Asp Lys Arg Leu Met Lys Glu Glu Ala Ser Asn Asn Gly Lys Gln  
65 70 75 80  
Asp Pro His Asn Gly Ile Met Gln Asp Ser Val Asn Gly Val Lys Gln  
85 90 95  
Asp Ser Ser Gly Ser Gly Lys Lys Ser Asp His Gln Arg His Ser Arg  
100 105 110  
Cys Lys Glu Val Glu Ser Gln Arg Phe Ala Asn Ala Met Asp Tyr Pro  
115 120 125  
Ala Ala Val Leu Ala Ser Glu Leu Arg Asp His Asp Leu Phe Lys Val  
130 135 140  
Asn His Asp Asn Glu Asp Thr Phe Ala Gly Ser Ser Ser Ala Ser Gln  
145 150 155 160  
Asp Arg Ser Ser Leu Gln Ser Gly Asn Pro Tyr Glu Ala Glu Ala Arg  
165 170 175  
Arg Arg Pro Phe Gln Asn Gly  
180

<210> 954  
<211> 105  
<212> PRT  
<213> Pinus radiata

<400> 954  
Ala Leu Phe Gly Ala Val Gln Ser Leu Pro Val Phe Thr Phe Ala Asn  
1 5 10 15  
Gln Ala Gly Leu Asp Met Leu Glu Thr Thr Leu Val Ala Leu Gln Asp  
20 25 30  
Ile Ser Leu Glu Lys Ile Leu Asp Asp Asn Gly Arg Lys Ser Phe Cys  
35 40 45  
Ser Asp Ile Ala Gln Ile Met Gln Gln Gly Tyr Ala Tyr Leu Pro Ala  
50 55 60  
Gly Val Cys Val Ser Ser Met Gly Arg Pro Ala Ser Tyr Asp Arg Ala  
65 70 75 80  
Ile Ala Trp Lys Val Leu Asn Asp Glu Glu Asn Pro His Cys Ile Ala  
85 90 95  
Phe Met Phe Met Asn Trp Ser Phe Val  
100 105

<210> 955  
<211> 85  
<212> PRT  
<213> Pinus radiata

<400> 955

Gln Arg Ile Trp His Glu Pro Ala Ser Asn Asn Lys Phe Thr Tyr Asn  
 1 5 10 15  
 Cys Asp Asn His Thr Phe Asn Tyr Leu Val Glu Asp Gly Phe Ala Tyr  
 20 25 30  
 Cys Val Val Ala Asp Glu Ser Val Gly Arg Gln Val Pro Met Ala Phe  
 35 40 45  
 Leu Glu Arg Val Lys Glu Asp Phe Lys Arg Arg Tyr Gly Gly Gly Arg  
 50 55 60  
 Ala Asp Thr Ala Val Ala Asn Ser Leu Asn Arg Asp Phe Gly Ser Lys  
 65 70 75 80  
 Leu Lys Glu His Met  
 85

<210> 956  
 <211> 119  
 <212> PRT  
 <213> Pinus radiata

<400> 956  
 Val Asn Ser Asn Gln Ser Asn Met Leu Ile Leu Gln Glu Ser Cys Thr  
 1 5 10 15  
 Asp Ala Ser Gly Ser Phe Val Ile Tyr Ala Pro Val Asp Ile Val Ala  
 20 25 30  
 Met Asn Val Val Leu Ser Gly Gly Asp Pro Asp Tyr Val Ala Leu Leu  
 35 40 45  
 Pro Ser Gly Phe Ala Ile Leu Pro Asp Gly Pro Lys Cys Met Ala Val  
 50 55 60  
 Thr Asn Ser Gly Ile Asn Asp Leu Gly Ser Gly Gly Ser Leu Leu Thr  
 65 70 75 80  
 Val Ala Phe Gln Ile Leu Val Asp Ser Val Pro Thr Ala Lys Leu Ser  
 85 90 95  
 Leu Gly Ser Val Ala Thr Val Asn Ser Leu Ile Ser Cys Thr Val Asp  
 100 105 110  
 Arg Ile Lys Ala Ala Val Thr  
 115

<210> 957  
 <211> 90  
 <212> PRT  
 <213> Pinus radiata

<400> 957  
 Gln Leu Leu Phe His Leu Arg Ser Gln Ser Ile Ser Pro Leu Val Thr  
 1 5 10 15  
 Cys Leu Arg Ser His Arg Ala Pro Pro Trp Pro Thr Pro Ile Ser Trp  
 20 25 30  
 Leu Cys Ile Ile Ile Arg Val Met Thr Glu Glu Gln Met Glu Thr Leu  
 35 40 45  
 Arg Arg Gln Ile Cys Val Tyr Ser Thr Ile Gly Ser Gln Leu Val Glu  
 50 55 60  
 Met His Arg Ala Met Ser Gln Gln Gln Ala Phe Phe Ser Gly Arg Leu  
 65 70 75 80  
 Cys Leu Trp Asp Asn Thr Cys Phe Met Ile  
 85 90

<210> 958  
 <211> 103  
 <212> PRT  
 <213> Pinus radiata

<400> 958

Met Gly Arg Gly Arg Val Glu Leu Lys Arg Ile Glu Asn Lys Ile Asn  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
 20 25 30  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe  
 35 40 45  
 Ser Ser Arg Gly Lys Leu Tyr Glu Phe Gly Ser Ala Gly Tyr Gly Ile  
 50 55 60  
 Glu Ile Ser Gly Leu Phe Ser Gly Ile Leu Tyr Tyr Asn Ile Arg Val  
 65 70 75 80  
 Gly Glu Gly Cys Glu Gly Glu Lys Arg Gly Cys Lys Val Tyr Ser Val  
 85 90 95  
 Ile Cys Phe Lys Gly Lys Ser  
 100

<210> 959  
 <211> 63  
 <212> PRT  
 <213> Pinus radiata

<400> 959  
 Met Val Arg Gly Lys Ile Gln Met Lys Arg Ile Glu Asn Thr Ala Ser  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
 20 25 30  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Met Ile Phe  
 35 40 45  
 Ser Pro Gly Gly Lys Leu Tyr Glu Phe Ala Asn Thr Ser Met Glu  
 50 55 60

<210> 960  
 <211> 60  
 <212> PRT  
 <213> Pinus radiata

<400> 960  
 Met Leu Leu Gln Asn Val Pro Pro Ala Leu Leu Val Arg Phe Leu Arg  
 1 5 10 15  
 Glu His Arg Ser Glu Trp Ala Asp Cys Asn Ile Asp Ala Tyr Ser Ser  
 20 25 30  
 Ala Thr Met Lys Ala Asn Ala Tyr Asn Val Pro Gly Ser Leu Gly Gly  
 35 40 45  
 Ile Thr Gly Ser Gln Val Ile Leu Pro Leu Ala His  
 50 55 60

<210> 961  
 <211> 52  
 <212> PRT  
 <213> Pinus radiata

<400> 961  
 Thr Ser Arg Leu His Phe Val Asp Gln Gln Leu Arg Gln Gln Arg Ala  
 1 5 10 15  
 Leu Gln Gln Leu Gly Met Ile Gln Gln His Ala Trp Arg Pro Gln Arg  
 20 25 30  
 Gly Leu Pro Glu Arg Ala Val Ser Ile Leu Arg Ala Trp Leu Phe Glu  
 35 40 45  
 His Phe Leu His  
 50

<210> 962

<211> 154  
 <212> PRT  
 <213> Pinus radiata

<400> 962  
 Ala Val Val Ile Trp Met Gly Asp Pro Glu Arg Thr Lys Met Pro Pro  
 1 5 10 15  
 Ile Lys Ile Thr Ile Thr Ile Thr Ile Met Ile Thr Ser Ser Ser Arg  
 20 25 30  
 Arg Gly Gly Asn Val Thr Thr Asp Thr Leu Leu Val Lys Phe Arg Arg  
 35 40 45  
 Trp Lys Arg Cys Leu Arg Ser Val His Ile Leu Met Thr Asn Lys Gly  
 50 55 60  
 Ser Gly Ser Ala Leu Asn Trp Ala Leu Lys Pro Arg Gln Val Lys Phe  
 65 70 75 80  
 Trp Phe Gln Asn Arg Arg Thr Gln Met Lys Ala Gln Gln Asp Arg Ser  
 85 90 95  
 Asp Asn Ala Ile Leu Arg Ala Glu Asn Glu Asn Leu Arg Asn Glu Asn  
 100 105 110  
 Val Ala Leu Arg Glu Ala Ile Lys Asn Gly Ala Cys Pro Asn Cys Gly  
 115 120 125  
 Gly Ser Thr Ser Leu Gly Glu Met Pro Gly Phe Asp Glu His His Phe  
 130 135 140  
 Arg Ile Glu Asn Thr Arg Leu Lys Glu Glu  
 145 150

<210> 963  
 <211> 143  
 <212> PRT  
 <213> Pinus radiata

<400> 963  
 Arg Ile Leu Lys Leu Glu Ile Pro Thr Ser Tyr Leu Val Cys Lys Ala  
 1 5 10 15  
 Arg Lys Met Gly Lys Lys Lys Val Glu Val Lys Leu Ile Gln Asn Pro  
 20 25 30  
 Thr Ser Arg Gln Gly Cys Phe Tyr Asn Arg Lys Cys Gly Leu Leu Lys  
 35 40 45  
 Lys Ala Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile  
 50 55 60  
 Ile Phe Ser Gln Thr Gly Lys Ile Tyr Glu Phe Ala Ser His Asp Asp  
 65 70 75 80  
 Val Asn Ala Ile Leu Ala Lys Tyr Arg Ile Gln Thr Gly Thr Thr Thr  
 85 90 95  
 Asn Ala Met Pro Ser Ser Leu Gln Asn Thr Glu Pro Glu Thr Leu His  
 100 105 110  
 Glu Glu Thr Asn Met Leu Gly Lys Arg Lys Lys Val Glu Lys Leu His  
 115 120 125  
 Glu Lys Ile Asn Met Leu Glu Lys Arg Gly Lys Asn Met Val Trp  
 130 135 140

<210> 964  
 <211> 123  
 <212> PRT  
 <213> Pinus radiata

<400> 964  
 Asp His His Ala Val Glu Asp Arg Glu Leu Lys Asn His Leu Leu Arg  
 1 5 10 15  
 Lys Tyr Ser Gly Tyr Leu Ser Ser Leu Lys Gln Glu Phe Met Lys Lys  
 20 25 30

Lys Lys Lys Gly Lys Leu Pro Lys Asp Ala Arg Gln Lys Leu Leu Asp  
           35                          40                          45  
 Trp Trp Ser Leu His Asp Lys Trp Pro Tyr Pro Ser Glu Thr Glu Lys  
           50                          55                          60  
 Ile Ala Leu Ala Glu Cys Thr Gly Leu Asp Gln Lys Gln Ile Asn Asn  
 65                          70                          75                          80  
 Trp Phe Ile Asn Gln Arg Lys Arg His Trp Lys Pro Ser Glu Asp Met  
                           85                          90                          95  
 His Phe Met Val Met Asn Ser His Ser Pro His Ser Ala Ala Leu Tyr  
                           100                          105                          110  
 Val Glu Arg His Met Met Thr Glu Gly Tyr Leu  
           115                          120

<210> 965  
 <211> 71  
 <212> PRT  
 <213> Pinus radiata

<400> 965  
 Met Glu His Leu Asn Ala Ala Ala Ala Gln Ala Ser Ser Ser Leu Tyr  
   1                          5                          10                          15  
 Gly Val Ser Met Ala Glu Tyr Gly Asp Val Gly Val Ser Ser Met Met  
                           20                          25                          30  
 Ala Leu Met Thr Gln His Glu Pro His Glu Ser Glu Ser Thr Met Thr  
           35                          40                          45  
 Thr Ser Met Pro Ser Ser Phe Ser Ser Phe His Gly His Ala Glu Cys  
           50                          55                          60  
 Leu Leu Ser Ala Ala Met Phe  
 65                          70

<210> 966  
 <211> 111  
 <212> PRT  
 <213> Pinus radiata

<400> 966  
 Met Gly Arg Gly Lys Ile Glu Ile Lys Lys Ile Glu Asn Ser Val His  
   1                          5                          10                          15  
 Arg Gln Val Thr Phe Cys Lys Arg Arg Gly Gly Leu Met Lys Lys Ala  
                           20                          25                          30  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Asp Val Ala Leu Ile Val Phe  
           35                          40                          45  
 Ser Ser Arg Gly Lys Leu Tyr Glu Leu Gly Thr Ser Asn Asn Asn Asn  
           50                          55                          60  
 Asn Ser Met Arg Ser Ile Leu Glu Arg Tyr Gln Lys Cys Ser Gln Thr  
 65                          70                          75                          80  
 Ala Lys His Met Asn Phe Ser Asn Asn Thr Ser Asp Glu Lys Met Lys  
                           85                          90                          95  
 Gln Glu Ile Asn Leu Leu Lys His Lys Leu Ile Ser Thr Tyr Gln  
           100                          105                          110

<210> 967  
 <211> 106  
 <212> PRT  
 <213> Pinus radiata

<400> 967  
 Met Asn Tyr Glu Gln Arg Leu Ile Ala Ala Ala Arg Leu Ala Asp Asn  
   1                          5                          10                          15  
 Leu Asn Ser Thr Thr Ala Lys Glu Phe Asp Ile Pro Ser Ala Glu Glu  
           20                          25                          30

Val Ala Glu Lys Cys Ser Glu Trp Gly Val Thr Ala Gln Leu Lys Ala  
           35                  40                  45  
 His Gln Ala Gln Gly Leu Ser Trp Leu Ile Arg Arg Tyr Ala Ile Gly  
       50                  55                  60  
 Val Asn Val Ile Leu Gly Asp Glu Met Gly Leu Gly Lys Thr Leu Gln  
       65                  70                  75                  80  
 Ala Ile Ser Leu Leu Ala Tyr Leu Lys Asp Arg Arg Lys Cys Pro Gly  
                   85                  90                  95  
 Pro Phe Leu Val Leu Cys Pro Leu Ser Val  
                   100                  105

<210> 968  
 <211> 257  
 <212> PRT  
 <213> Pinus radiata

<400> 968  
 Ser Val Asp Val Leu Thr Ala Phe Ser Thr Gly Asn Gly Gly Thr Ile  
   1                  5                  10                  15  
 Glu Leu Leu Tyr Met Gln Met Tyr Ala Pro Thr Thr Leu Ala Ser Ala  
                   20                  25                  30  
 Arg Asp Phe Trp Thr Leu Arg Tyr Thr Ser Val Leu Glu Asp Gly Ser  
                   35                  40                  45  
 Leu Val Val Cys Glu Arg Ser Leu Ser Gly Thr Gln Gly Gly Pro Ser  
       50                  55                  60  
 Met Pro Ala Val Gln Gln Phe Val Arg Ala Glu Met Gln Pro Ser Gly  
       65                  70                  75                  80  
 Tyr Leu Ile Arg Pro Cys Glu Gly Gly Gly Ser Leu Ile His Ile Val  
                   85                  90                  95  
 Asp His Met Asp Leu Glu Pro Trp Ser Val Pro Glu Val Leu Arg Pro  
                   100                  105                  110  
 Leu Tyr Glu Ser Ser Thr Val Leu Ala Gln Lys Val Thr Met Ser Ala  
                   115                  120                  125  
 Leu Arg His Leu Arg Gln Ile Ala Gln Glu Ala Ser Ser Asp Val Val  
       130                  135                  140  
 Leu Gly Trp Gly Arg Gln Pro Ala Ala Leu Arg Thr Phe Ser Gln Arg  
       145                  150                  155                  160  
 Leu Cys Lys Gly Phe Asn Glu Ala Val Asn Gly Phe Thr Asp Asp Gly  
                   165                  170                  175  
 Trp Ser Leu Met Gly Asn Asp Gly Met Glu Asp Val Thr Ile Leu Val  
                   180                  185                  190  
 Asn Ser Ser Pro Ser Lys Leu Phe Gly Gln Gln Phe Ala Ser Ser Asp  
                   195                  200                  205  
 Gly Leu Pro Ala Leu Gly Gly Gly Ile Leu Cys Ala Lys Ala Ser Met  
       210                  215                  220  
 Leu Leu Gln Asn Val Pro Pro Ala Leu Leu Val Arg Phe Leu Arg Glu  
       225                  230                  235                  240  
 His Arg Ser Glu Trp Ala Asp Ser Asn Ile Asp Ala Tyr Ser Ala Ala  
                   245                  250                  255  
 Ser

<210> 969  
 <211> 135  
 <212> PRT  
 <213> Pinus radiata

<400> 969  
 Met Ala Met Glu Arg Ser Gly Asp Leu Leu Lys Gly Cys Gly Leu  
   1                  5                  10                  15  
 Ser Glu Asn Ala Leu Asp Ala Ile Ser Glu Gly Ser Ile Gln Asn His

20							25					30				
Trp	Ser	Trp	Ser	Glu	Val	Lys	Gln	Leu	Ser	Val	Thr	Leu	Leu	Arg	Ala	
35							40					45				
Leu	Asp	Ala	Gly	Ile	Glu	His	Ser	Leu	Leu	Gly	Ser	Met	Met	Ser	Ile	
50							55					60				
Asp	Arg	Tyr	Ala	Ala	Ala	Glu	Ser	Phe	His	Arg	Leu	Ala	Trp	Ala	Tyr	
65							70					75				
Ala	His	Val	Pro	Asp	Leu	His	Ile	Met	Trp	Leu	Leu	His	Leu	Cys	Asp	
85							90					95				
Ala	His	Gln	Glu	Met	Gln	Ser	Trp	Ala	Glu	Ala	Ala	Gln	Cys	Ala	Val	
100							105					110				
Ala	Val	Ala	Gly	Val	Ile	Met	Gln	Ala	Leu	Val	Gly	Arg	Asn	Asp	Ala	
115							120					125				
Val	Trp	Gly	Lys	Glu	His	Val										
130							135									

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<210> 970
<211> 128
<212> PRT
<213> Pinus radiata
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<div> <div>&lt;400&gt;</div> <div>970</div> </div>															
Arg	Gly	Arg	Val	Gln	Leu	Arg	Arg	Ile	Glu	Asn	Lys	Ile	Ser	Arg	Gln
1				5					10					15	
Val	Thr	Phe	Ser	Lys	Arg	Arg	Asn	Gly	Leu	Met	Lys	Lys	Ala	Ala	Glu
			20					25					30		
Leu	Ser	Ile	Leu	Cys	Asp	Ala	Glu	Val	Ala	Leu	Ile	Val	Phe	Ser	Asn
		35					40					45			
Lys	Asp	Lys	Leu	Tyr	Glu	Phe	Ala	Ser	Ser	Ser	Met	Thr	Lys	Ile	Leu
	50					55					60				
Glu	Arg	Tyr	Arg	Lys	Arg	Ser	Asn	Leu	Ile	Gln	Asp	Ile	Gly	Lys	Asp
65					70					75					80
Pro	Gln	Asn	Ser	Asp	Ile	Glu	Leu	Thr	Arg	Leu	Lys	Glu	Glu	Val	Asp
				85					90					95	
Arg	Leu	Gln	Arg	Ser	Arg	Arg	His	Leu	Leu	Gly	Glu	Asp	Leu	His	Gln
			100					105					110		
Leu	Gly	Ala	Thr	Asp	Leu	Gln	His	Leu	Glu	Gln	Gln	Leu	Glu	Glu	Ala
		115					120					125			

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<210> 971
<211> 147
<212> PRT
<213> Pinus radiata
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<400> 971															
Met	Asp	Ser	Phe	Glu	Ala	Lys	Gly	Lys	Gly	Glu	Lys	Arg	Arg	Thr	Val
1				5					10					15	
Arg	Gly	Lys	Thr	Gln	Met	Lys	Arg	Ile	Glu	Asn	Ala	Thr	Ser	Arg	Gln
			20					25					30		
Val	Thr	Phe	Ser	Lys	Arg	Arg	Asn	Gly	Leu	Leu	Lys	Lys	Ala	Tyr	Glu
		35					40					45			
Leu	Ser	Val	Leu	Cys	Asp	Ala	Glu	Val	Ala	Leu	Met	Val	Phe	Ser	Pro
	50					55					60				
Arg	Gly	Lys	Leu	Tyr	Glu	Phe	Ala	Asn	Pro	Ser	Met	Gln	Lys	Met	Leu
65					70					75					80
Glu	Arg	Tyr	Glu	Lys	Cys	Ser	Glu	Gly	Ser	Lys	Thr	Thr	Ser	Ile	Ala
			85						90					95	
Lys	Glu	Glu	Asp	Pro	Lys	Ala	Leu	Lys	Arg	Glu	Ile	Ala	Asn	Met	Glu
			100					105					110		
Glu	Arg	Ile	Glu	Ile	Leu	Glu	Arg	Thr	Gln	Arg	Lys	Met	Leu	Gly	Glu
		115					120					125			



Glu Leu Ala Ser Cys Ala Leu Lys Asp Leu Asn Gln Leu Glu Ser Gln  
 130 135 140  
 Val Glu Arg  
 145

<210> 972  
 <211> 45  
 <212> PRT  
 <213> Pinus radiata

<400> 972  
 Met Glu Lys Gln Asn Ser Gly Glu Asp Ser Asp Ser Lys Gly Gln Leu  
 1 5 10 15  
 Asp Asn Gly Lys Tyr Val Arg Tyr Thr Asn Glu Gln Val Glu Thr Leu  
 20 25 30  
 Glu Arg Ala Tyr Asn Glu Cys Ser Lys Pro Ser Thr Ser  
 35 40 45

<210> 973  
 <211> 97  
 <212> PRT  
 <213> Pinus radiata

<400> 973  
 Met Gly Ala Phe Ala Leu Leu Ser Ser Trp Ile Asp Ala Ala Thr Asn  
 1 5 10 15  
 Pro Lys Tyr Arg Lys Lys Arg Lys Gln Phe Gln Thr Val Glu Leu Arg  
 20 25 30  
 Val Arg Met Asp Cys Glu Gly Cys Glu Arg Lys Val Arg Asn Ala Leu  
 35 40 45  
 Asn Ser Met Lys Gly Val Ser Ser Val Glu Val Glu Arg Lys Gln Tyr  
 50 55 60  
 Lys Ala Thr Val Thr Gly Tyr Val Asp Ala Asn Lys Val Leu Lys Arg  
 65 70 75 80  
 Val Arg Gln Thr Gly Lys Lys Ala Glu Leu Trp Pro Tyr Lys Pro Tyr  
 85 90 95  
 His

<210> 974  
 <211> 135  
 <212> PRT  
 <213> Pinus radiata

<400> 974  
 Phe Ser Asn Thr Trp Phe Ser Gly Asn Leu Leu Ala Pro Gly Ala Asn  
 1 5 10 15  
 Lys Gln Met His Leu Asp Ser Ser Ser Thr Gly Ala Pro Gly Leu Ser  
 20 25 30  
 Asn Val Leu Ile Gly Ser Lys Tyr Leu Lys Ala Ala Gln Gln Leu Leu  
 35 40 45  
 Asp Glu Val Val Asn Val Gly Lys Gly Ile Lys Pro Asp Ser Ala Lys  
 50 55 60  
 His Gln Lys Ser Gln Ser Trp Ile Gly Thr Thr Ala Asn Lys Glu Asn  
 65 70 75 80  
 Ser Gly Ala Glu Gly Gly Gly Lys Asp Gly Ala Ala Ala Ala Pro Thr  
 85 90 95  
 Trp Arg Ser Thr Ser Ala Gln Glu Thr Asn Asp Arg Pro Ser Glu Leu  
 100 105 110  
 Ser Pro Ala Glu Arg Gln Glu Leu Gln Met Lys Lys Ala Lys Leu Val  
 115 120 125

Ala Met Leu Asp Glu Val Asp  
130 135

<210> 975  
<211> 93  
<212> PRT  
<213> Pinus radiata

<400> 975  
Tyr Ser Glu Val Arg Thr Arg Ala Arg Phe Trp Arg Arg Lys Gly Arg  
1 5 10 15  
Val Arg Arg Phe Lys Tyr Thr Cys Lys Ser Ala Gly His Pro Ser Ile  
20 25 30  
Arg Lys Arg Ile Lys Asp Gly Lys Gly Gln Pro Cys Arg Gln Tyr Thr  
35 40 45  
Pro Cys Gly Cys Gln Leu Thr Cys Gly Lys Gln Cys Pro Cys Leu Arg  
50 55 60  
Asn Gly Thr Cys Cys Glu Lys Tyr Cys Gly Cys Ser Lys Ser Cys Lys  
65 70 75 80  
Asn Arg Phe Arg Gly Cys His Cys Ala Lys Ser Gln Cys  
85 90

<210> 976  
<211> 114  
<212> PRT  
<213> Pinus radiata

<400> 976  
Ala Asp Glu Ser Leu Trp Ile Pro Asn Leu Asp Ala Gly Lys Glu Thr  
1 5 10 15  
Leu Ser Tyr Glu Glu Tyr Met Arg Gln Phe Pro Ser Thr Ile Thr Pro  
20 25 30  
Lys Pro Ile Gly Leu Ala Thr Glu Ala Thr Arg Glu Thr Gly Met Val  
35 40 45  
Ile Thr Asn Ser Leu Asn Leu Val Glu Thr Leu Met Asp Val Asp His  
50 55 60  
Trp Lys Glu Met Phe Pro Cys Met Ile Ser Arg Ala Ala Thr Val Asp  
65 70 75 80  
Val Ile Ser Ser Gly Met Gly Gly Thr Arg Asn Gly Ala Leu Gln Leu  
85 90 95  
Met Tyr Ala Glu Leu Gln Val Leu Ser Pro Leu Val Pro Ala Arg Glu  
100 105 110  
Tyr Phe

<210> 977  
<211> 148  
<212> PRT  
<213> Pinus radiata

<400> 977  
Gln Ser Glu Asn Ile Met Ser Thr Arg Ile Pro Ser Ser Phe Ser Ser  
1 5 10 15  
Phe His Gly His Ala Asp Cys Leu Leu Ser Ala Ala Met Phe Gln Gly  
20 25 30  
Ser Gln Gly Asp His Lys Leu Asn Pro Gln Pro Gly Met Asn Gln Gln  
35 40 45  
Leu Val Ser Glu Gln Ser Ile Met Ser Asp Ser Ser Met Pro Phe Val  
50 55 60  
Lys Thr Lys Ala Cys Ser Gly Leu Arg Asn Gln Phe Glu Phe His Arg  
65 70 75 80

Glu Gln Pro Gly Asn Cys Tyr Thr Asp Gln Ser Ser Asn Ile Pro Leu  
                             85                            90                            95  
 Ser Pro Ile Val Thr Ser Leu Ala Ser Gln Ala Arg Gly Glu Ala Arg  
                             100                            105                            110  
 Met Ile Pro Ser Leu Asp Ala Asn Ser Ala His Phe Asn Val Asp Asn  
                             115                            120                            125  
 Glu Glu His Ala Ile Lys Ser Lys Ile Leu Ala His Pro Gln Tyr Pro  
                             130                            135                            140  
 Ser Leu Leu Gly  
 145

<210> 978  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

<400> 978  
 Met Arg Asn Pro Ile Cys Thr Asn Cys Gly Gly Pro Ala Val Leu Gly  
   1                            5                            10                            15  
 Glu Met Ser Phe Glu Glu Gln Gln Leu Arg Ile Glu Asn Ala Arg Leu  
                             20                            25                            30  
 Lys Glu Glu Leu Asp Arg Leu Cys Ala Leu Ala Gly Lys Phe Phe Gly  
                             35                            40                            45  
 Arg Pro Ile Pro Ser Met Pro Ser Val Pro Leu Met Pro Lys Ser Ser  
                             50                            55                            60  
 Leu Asp Leu Gly Val Gly Gly Met Pro Thr Ser Leu Pro Ser Ala Ser  
   65                            70                            75                            80  
 Ala Asp Leu Met His Gly Pro Ala Gly Gly Arg Thr Gly Asn Ile Ile  
                             85                            90                            95  
 Gly Ile Glu Arg Ser Met Leu Ala Glu Leu Ala  
                             100                            105

<210> 979  
 <211> 251  
 <212> PRT  
 <213> Pinus radiata

<400> 979  
 Met Met Met Ser Gly Gly Arg Met Tyr Gly Gly Pro Asn Val Leu Val  
   1                            5                            10                            15  
 Thr Ala Asn Glu Asn Ile Ser Arg Ser Ala Asp Ala Leu Glu Ala Leu  
                             20                            25                            30  
 Leu Ser Ser Pro Val Phe Asn Gly Ser Arg Ser Val Ala Asn Leu Glu  
                             35                            40                            45  
 Glu Val Ile Gly Asn Val Ser Lys Arg Ser Phe Tyr Asn Ser Phe Asp  
                             50                            55                            60  
 Gln Glu Glu Thr Gly Asp Glu Asp Leu Asp Asp Cys Ile His Pro Pro  
   65                            70                            75                            80  
 Glu Lys Lys Arg Arg Leu Thr Ala Asp Gln Val Gln Phe Leu Glu Arg  
                             85                            90                            95  
 Ser Phe Glu Ile Glu Asn Lys Leu Glu Pro Glu Arg Lys Ile Gln Leu  
                             100                            105                            110  
 Ala Lys Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Val Trp Phe Gln  
                             115                            120                            125  
 Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Leu Glu Arg Asp Tyr Asp  
                             130                            135                            140  
 Ile Leu Lys Ser Arg Tyr Glu Asn Leu Arg Val Asp Tyr Asp Ser Leu  
   145                            150                            155                            160  
 Leu Lys Glu Lys Asp Lys Leu Arg Ala Glu Val Thr Phe Leu Thr Asp  
                             165                            170                            175  
 Lys Leu His Asp Ser Asp His Glu Ala Leu Thr Lys Asp Ser Glu Ser

180 185 190  
 Ala Asp Lys Lys Val Tyr Pro Gln Pro Ala Ser His Ser Asp Cys Val  
 195 200 205  
 Gly Glu Pro Glu Arg Ser Thr Ala Ala Lys Asp Thr Pro Pro Gly Cys  
 210 215 220  
 Lys His Glu Asp Leu Leu Ser Ser Gly Thr Asp Ser Ser Gly Val Leu  
 225 230 235 240  
 Asp Glu Asp Ser Pro His His Val Asp Cys Gly  
 245 250

<210> 980  
 <211> 128  
 <212> PRT  
 <213> Pinus radiata

<400> 980  
 Lys Ile Glu Asn Thr Thr Ser Arg Gln Val Thr Phe Cys Lys Arg Lys  
 1 5 10 15  
 Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu Ser Leu Leu Cys Asp Ala  
 20 25 30  
 Glu Val Ala Leu Leu Ile Phe Ser Thr Ser Gly Arg Leu Tyr Glu Phe  
 35 40 45  
 Ala Asn Lys Ser Val Ser Ala Thr Thr Glu Arg Tyr Met Arg Thr Tyr  
 50 55 60  
 Ala Glu Asn Met Pro Gln Ser Arg Ala Leu Tyr Pro Asp Cys His His  
 65 70 75 80  
 Trp Gln Glu Glu Val Arg Lys Leu Thr Gln Gln Arg Asp Ser Leu Thr  
 85 90 95  
 Asn Ser Ile Arg Gln Ile Met Gly Glu Gly Leu Glu Ser Leu Ser Met  
 100 105 110  
 Lys Glu Leu Lys His Ile Gln Val Gln Leu Glu Lys Ser Ile Ser Cys  
 115 120 125

<210> 981  
 <211> 119  
 <212> PRT  
 <213> Pinus radiata

<400> 981  
 Tyr Thr Ala Glu Gln Val Glu Ala Leu Glu Arg Leu Tyr Asn Asp Cys  
 1 5 10 15  
 Pro Lys Pro Ser Ser Leu Arg Arg Gln Gln Leu Ile Arg Glu Cys Pro  
 20 25 30  
 Ile Leu Ser His Ile Glu Pro Lys Gln Ile Lys Val Trp Phe Gln Asn  
 35 40 45  
 Arg Arg Cys Arg Glu Lys Gln Arg Lys Glu Ala Ser Arg Leu Gln Thr  
 50 55 60  
 Val Asn Arg Lys Leu Thr Ala Met Asn Lys Leu Leu Met Glu Glu Asn  
 65 70 75 80  
 Asp Arg Leu Gln Lys Gln Val Ser Gln Leu Val Tyr Glu Asn Gly Tyr  
 85 90 95  
 Phe Arg Gln Gln Ile Gln Thr Val Ser Ile Thr Thr Thr Asp Thr Ser  
 100 105 110  
 Cys Glu Ser Val Val Thr Ser  
 115

<210> 982  
 <211> 85  
 <212> PRT  
 <213> Pinus radiata

<400> 982  
 Lys His Glu Phe Asp Val Arg Tyr Gln Lys Leu Glu Asp Lys Leu Tyr  
 1 5 10 15  
 Ile Ala Gln Leu Tyr Phe Pro Leu Ile Gly Leu Ile Leu Asp Glu Met  
 20 25 30  
 Pro Val Phe Tyr Asn Leu Ser Thr Val Glu Lys Arg Glu Val Leu Ile  
 35 40 45  
 Cys Ile Met Gln Ile Ile Arg Asn Leu Asp Asp Pro Ser Leu Ile Lys  
 50 55 60  
 Ala Trp Gln Gln Ser Ile Ala Arg Thr Arg Leu Phe Phe Lys Leu Leu  
 65 70 75 80  
 Glu Glu Cys Leu Val  
 85

<210> 983  
 <211> 96  
 <212> PRT  
 <213> Pinus radiata

<400> 983  
 Gly Leu Leu Val Thr Met Arg Leu Phe Ala Ala Thr Glu Pro Lys Arg  
 1 5 10 15  
 Val Phe Ala Val Thr Lys Arg Ile Phe Leu Leu Gly Phe Val Ser Phe  
 20 25 30  
 Phe Leu Arg Glu Gly Leu Val Ala Ser Val Trp Leu Pro Val Ser Pro  
 35 40 45  
 Gln Arg Leu Phe Asp Phe Leu Arg Asp Glu Arg Leu Arg Ser Lys Trp  
 50 55 60  
 Asp Ile Leu Ser Asn Gly Gly Pro Met Gln Glu Met Ala His Ile Pro  
 65 70 75 80  
 Lys Gly Gln Asp Pro Arg Asn Cys Val Ser Leu Leu Arg Ala Ser Ile  
 85 90 95

<210> 984  
 <211> 109  
 <212> PRT  
 <213> Pinus radiata

<400> 984  
 Leu Val Ser Leu Tyr Asn Asn His Leu Asn Gly Ile Leu Ala Asp Glu  
 1 5 10 15  
 Met Gly Leu Gly Lys Thr Val Gln Val Ile Ser Leu Ile Cys Tyr Leu  
 20 25 30  
 Met Glu Gln Lys Asn Asp Arg Gly Pro Phe Leu Val Val Val Pro Ser  
 35 40 45  
 Ser Val Leu Ser Gly Trp Leu Ser Glu Ile Ser Phe Trp Ala Pro Ser  
 50 55 60  
 Ile Ser Lys Ile Ala Tyr Thr Gly Ser Pro Asp Asp Arg Arg Arg Leu  
 65 70 75 80  
 Phe Arg Glu Asn Ile Ser Gln Gln Lys Phe Asn Val Leu Leu Thr Thr  
 85 90 95  
 Tyr Glu Tyr Leu Met Asn Lys Arg Ser Thr Lys Thr Glu  
 100 105

<210> 985  
 <211> 52  
 <212> PRT  
 <213> Pinus radiata

<400> 985  
 Pro Lys Asp Ala Asp Lys His Met Leu Ala Arg Gln Ala Gly Leu Thr

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      1           5           10           15
Arg Ser Gln Val Ser Asn Trp Phe Ile Asn Ala Arg Val Arg Leu Trp
      20           25           30
Lys Pro Met Val Glu Glu Ile Tyr Met Glu Glu Ile Lys Glu Ala Glu
      35           40           45
Leu Gly His Ser
      50

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<210> 986  
 <211> 101  
 <212> PRT  
 <213> Pinus radiata

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      <400> 986
Gln Gln Asp Asp Asp Ala Lys Val Tyr Glu Ser Pro Leu Arg Arg Lys
      1           5           10           15
Asn Ala Glu Ala Pro Arg Thr Arg Trp Arg Phe Leu Pro Leu Glu Ser
      20           25           30
Ala Leu Glu Asn Pro Tyr Gln Gly Leu Met Lys His Cys Thr Ser Leu
      35           40           45
Leu Lys Thr Leu Met Asn His Lys Phe Gly Tyr Val Phe Asn Glu Pro
      50           55           60
Val Asp Pro Val Ala Leu Gly Val Pro Asp Tyr Phe Thr Val Ile Thr
      65           70           75           80
Ser Pro Met Asp Leu Gly Thr Ile Lys Ala Lys Leu Gln Asp Ser Val
      85           90           95
Tyr Ser Ser Pro Leu
      100

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<210> 987  
 <211> 230  
 <212> PRT  
 <213> Pinus radiata

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      <400> 987
Cys Thr Gly Val Ala Ala Arg Ala Cys Gly Phe Ala Gly Leu Glu Pro
      1           5           10           15
Ser Lys Val Ala Asp Ile Leu Lys Asp Arg Pro Ala Trp Leu His Asp
      20           25           30
Cys Arg Arg Leu Asp Val Leu Thr Ala Phe Pro Thr Gly Lys Gly Gly
      35           40           45
Ala Val Glu Leu Leu Tyr Thr Gln Met Tyr Ala Pro Thr Thr Leu Ala
      50           55           60
Pro Ala Arg Asp Leu Leu Thr Leu Arg Tyr Thr Ser Leu Leu Glu Asp
      65           70           75           80
Gly Ser Leu Val Val Cys Glu Arg Ser Leu Thr Gly Thr Gln Ser Gly
      85           90           95
Pro Asn Met Pro Pro Val Gln His Phe Val Arg Ala Gln Met Leu Pro
      100           105           110
Ser Gly Tyr Leu Ile Arg Pro Cys Glu Gly Gly Gly Cys Ile Ile His
      115           120           125
Ile Val Asp His Met Asp Leu Glu Pro Trp Ser Val Pro Glu Val Ile
      130           135           140
Arg Pro Leu Tyr Glu Ser Ser Ala Val Leu Ala Gln Lys Met Thr Ile
      145           150           155           160
Thr Ala Leu Arg His Leu Arg Gln Val Ala Gln Glu Val Ser Gly Glu
      165           170           175
Val Val Leu Gly Trp Gly Arg Gln Pro Ala Ala Leu Arg Ala Phe Ser
      180           185           190
Gln Arg Leu Cys Arg Gly Phe Asn Asp Ala Val Asn Gly Phe Ala Asp
      195           200           205

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Asp Gly Trp Ser Leu Leu Gly Ser Asp Gly Val Glu Asp Val Ile Ile  
 210 215 220  
 Ala Ile Asn Ser Ser Pro  
 225 230

<210> 988  
 <211> 164  
 <212> PRT  
 <213> Pinus radiata

<400> 988  
 Gln Tyr Leu Arg Gln Gln Leu Gln Leu Leu His Ala Arg Ala Gly Asn  
 1 5 10 15  
 Asn Thr Arg Ser Leu Gln Gln Met Ala Val Thr Ala Asn Asp Thr Ser  
 20 25 30  
 Ser Asp Ser Val Val Thr Ser Gly Gln Arg Gln Gln His Ser Pro Gln  
 35 40 45  
 His Pro Pro Tyr Ser Val Ser Thr Ser Arg Leu Phe Phe Ile Ala Glu  
 50 55 60  
 Glu Thr Leu Thr Glu Phe Leu Ala Lys Ala Thr Gly Thr Ala Val Asp  
 65 70 75 80  
 Trp Ile Gln Met Pro Gly Met Lys Pro Gly Pro Asp Ser Ile Gly Val  
 85 90 95  
 Val Ala Val Ala His Ala Cys Gly Gly Val Ala Val Gln Ala Trp Gly  
 100 105 110  
 Val Val Ser Leu Glu Pro Ser Glu Val Ala Glu Ala Leu Arg Asp Lys  
 115 120 125  
 Val Ser Trp Leu Cys Asp Cys Arg Lys Met Glu Val Leu Gly Thr Phe  
 130 135 140  
 Asp Ser Thr Asp Gly Arg Lys Leu Glu Leu Leu His Thr Gln Met Tyr  
 145 150 155 160  
 Ala Pro Ile Thr

<210> 989  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

<400> 989  
 Met Gly Lys Thr Lys Met Glu Met Lys His Ile Gln Asn Pro Ser Arg  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Lys Asn Gly Leu Leu Lys Lys Ala  
 20 25 30  
 Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe  
 35 40 45  
 Ser Glu Thr Gly Lys Ile Ser Glu Phe Ala Ser His Asn Asp Met Ala  
 50 55 60  
 Thr Ile Leu Glu Lys Tyr Arg Ile Tyr Thr Gln Thr Glu Thr Asp Gly  
 65 70 75 80  
 Asn Met Gly Ala Ser Ser Val Gln Ser Val Lys Gly Trp Phe Pro Asn  
 85 90 95  
 Phe Leu Glu Ile Ala Gly Phe Ser Val Cys Gly  
 100 105

<210> 990  
 <211> 68  
 <212> PRT  
 <213> Pinus radiata

<400> 990

Met Gly Arg Gly Pro Val Gln Leu Arg Arg Ile Glu Asn Lys Ile Asn  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Ile Lys Lys Ala  
 20 25 30  
 Ser Glu Leu Ser Ile Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe  
 35 40 45  
 Ser Asn Lys Gly Lys Leu Tyr Glu Phe Ser Ser Ser Ser Met Thr Lys  
 50 55 60  
 Ile Leu Glu Arg  
 65

<210> 991  
 <211> 230  
 <212> PRT  
 <213> Pinus radiata

<400> 991  
 Leu Ser Leu Ser Pro Gln Gln Leu Ser Asn Ile Gln Leu Ser Cys Phe  
 1 5 10 15  
 Gln Asn Gln Pro Thr Asp Ser Glu Val Asn Cys Pro Ser Ile Ser Glu  
 20 25 30  
 Ala Thr Ser Gln Glu Asn Leu Asn Arg Ser Asp Arg Leu Thr Ser Lys  
 35 40 45  
 Leu Ser Gly Ser Leu Ser Ser Phe Arg Ala Ser Ser Arg Asp Gly Met  
 50 55 60  
 Leu Gly Thr Lys Phe Leu Gly Ser Val Asn Gly Pro Glu Cys Asn Lys  
 65 70 75 80  
 Pro Met His His Gly Thr Asn Ala Ile Gly Ala Ala Glu Leu Ser Asn  
 85 90 95  
 Thr Leu Thr Gly Ser Lys Tyr Phe Lys Ala Ala Gln Gln Leu Leu Asp  
 100 105 110  
 Glu Val Val Asn Val Gly Lys Gly Ile Lys Ser Asp Ser Val Asn His  
 115 120 125  
 Gln Lys Ser Gln Thr Trp Phe Gly Ala Ile Ser Asp Lys Lys Asn Ile  
 130 135 140  
 Ala Thr Glu Ala Thr Thr Asn Asp Arg Thr Thr Ser Ala Ile Thr Gly  
 145 150 155 160  
 Ala Ser Ile Ser Ala Glu Val Met Lys Asn Glu His Ala Phe Gly Leu  
 165 170 175  
 Thr Pro Ala Asp Arg Gln Glu Leu Gln Met Lys Lys Ala Lys Leu Val  
 180 185 190  
 Ala Met Leu Asp Glu Val Asp Arg Arg Tyr Arg Gln Tyr Tyr His Gln  
 195 200 205  
 Met Gln Ile Val Val Ser Ser Phe Glu Thr Ala Ala Gly Phe Gly Ala  
 210 215 220  
 Ala Lys Thr Tyr Thr Ser  
 225 230

<210> 992  
 <211> 76  
 <212> PRT  
 <213> Pinus radiata

<400> 992  
 Met Gly Arg Gly Lys Ile Glu Leu Lys Lys Ile Glu Ser Thr Ser Asn  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Met Gly Leu Leu Lys Lys Ala  
 20 25 30  
 Gln Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Val Ile Ile Phe  
 35 40 45  
 Ser Asn Thr Gly Arg Leu Tyr Asp Phe Ser Ser Ser Ser Met Glu Lys



50 55 60  
Met Ile Glu Thr Tyr Tyr Arg Phe Ile Glu Lys Asn  
65 70 75

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<210> 993
<211> 77
<212> PRT
<213> Pinus radiata
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<400> 993															
Val	Thr	Leu	Phe	Leu	Val	Leu	Gln	Val	Leu	Asp	Arg	Gly	Glu	Lys	Ile
1				5					10					15	
Glu	Leu	Leu	Val	Asp	Lys	Thr	Glu	Asn	Leu	Arg	Phe	Gln	Ala	Gln	Asp
			20				25						30		
Phe	Gln	Lys	Gln	Gly	Thr	Gln	Leu	Arg	Arg	Lys	Met	Trp	Phe	Gln	Asn
		35				40					45				
Met	Lys	Val	Lys	Leu	Val	Val	Leu	Gly	Ile	Val	Phe	Val	Leu	Ile	Leu
	50					55				60					
Ile	Ile	Trp	Leu	Ser	Ile	Cys	His	Gly	Phe	Lys	Cys	His			
65					70					75					

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<210> 994
<211> 110
<212> PRT
<213> Pinus radiata
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<400> 994															
Pro 1	Asn	Ser	Arg	Ser 5	Asp	Gly	Asn	Gly	Lys 10	Ala	Asp	Arg	Ser	Asp 15	Ser
Met	Gly	Thr	Glu 20	Ala	Arg	Thr	Arg	Thr 25	Arg	Phe	Trp	Arg	Arg 30	Arg	Gly
Arg	Val	Arg 35	Arg	Leu	Lys	Tyr 40	Thr	Trp	Lys	Ser	Ala	Gly 45	His	Pro	Ser
Ile	Lys 50	Lys	Arg	Ile	Ala	Asp 55	Ser	Lys	Asp	Gln	Pro 60	Cys	Arg	Gln	Phe
Thr 65	Pro	Cys	Asp	Cys	Gln 70	Ser	Met	Cys	Gly	Lys 75	Gln	Cys	Pro	Cys 80	Leu
Arg	Ser	Gly	Thr 85	Cys	Cys	Glu	Lys	Tyr 90	Cys	Gly	Cys	Ser	Lys 95	Gly	Cys
Lys	Asn	Arg	Phe 100	Arg	Gly	Cys	His	Cys 105	Ala	Lys	Ser	Gln	Cys 110		

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<210> 995
<211> 293
<212> PRT
<213> Pinus radiata
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	<400>	995														
Ala	Ser	Gln	Phe	Ser	Gly	Asn	Asp	Met	Arg	Asn	Tyr	Gly	Ala	Lys	Glu	
1				5					10					15		
Val	Thr	Ser	Gly	Leu	Ala	Thr	Gly	Gly	Gln	Arg	Pro	Pro	Ala	Leu	Gln	
			20					25					30			
Leu	Asn	Leu	Ala	Ala	Leu	Asp	Ser	Ser	Gly	Asp	Gly	Ala	Ala	Ala	Lys	
		35					40					45				
Glu	Lys	Arg	Thr	Pro	Lys	Val	Asn	Pro	Tyr	Tyr	Leu	Asn	Ser	Glu	Phe	
	50					55					60					
Val	Met	Gly	Lys	Asp	Lys	Met	Pro	Pro	Pro	Pro	Pro	Asp	Asn	Lys	Lys	
65					70					75					80	
Gly	Gly	Met	Lys	Arg	Thr	Ala	Gln	Gly	Lys	Ser	Glu	Ile	Arg	Glu	Thr	
				85					90					95		
Lys	Arg	Pro	Val	Ala	Asp	Pro	Met	Asn	Gly	Lys	Ile	Leu	Gln	Asp	Val	

100 105 110  
 Met Lys Gln Cys Gly Phe Leu Leu Ser Arg Leu Ile Lys His Lys His  
 115 120 125  
 Gly Trp Val Phe Lys Ala Pro Val Asp Thr Val Ala Leu Gly Leu His  
 130 135 140  
 Asp Tyr Asn Thr Ile Ile Lys Gln Pro Met Asp Leu Gly Thr Ala Lys  
 145 150 155 160  
 Ala Lys Leu Asn Ala Asn Glu Tyr Lys Ser Pro Gln Glu Phe Ala Gly  
 165 170 175  
 Asp Ile Arg Leu Thr Phe Asn Asn Ala Met Thr Tyr Asn Pro Asn Gly  
 180 185 190  
 His Glu Val His Ile Met Ala Glu Gln Met Leu Gln Phe Phe Glu Asp  
 195 200 205  
 Arg Trp Lys Pro Ile Cys Asp Arg Tyr Glu Glu Glu Lys Arg Lys Leu  
 210 215 220  
 Ser Trp Ser Val Asn Asp Gly Leu Leu Pro Gly Ala Ser Gln Asn Met  
 225 230 235 240  
 Lys Asn Phe Pro Phe Gly Glu Thr Pro Lys Lys Asn Leu Lys Lys Thr  
 245 250 255  
 Glu Pro Leu Leu Gly Leu Ser Pro Arg Pro Pro Pro Asn Ala Lys Ser  
 260 265 270  
 Lys Ala Asn Gln Thr Leu Arg Ala Pro Ala Pro Lys Lys Pro Lys Ala  
 275 280 285  
 Lys Asp Leu His Lys  
 290

<210> 996  
 <211> 144  
 <212> PRT  
 <213> Pinus radiata

<400> 996  
 Lys Phe Asp Ile Cys Val Thr Ser Phe Glu Met Ala Ile Lys Glu Lys  
 1 5 10 15  
 Thr Ala Leu Lys Arg Phe Ser Trp Arg Tyr Ile Ile Ile Asp Glu Ala  
 20 25 30  
 His Arg Ile Lys Asn Glu Asn Ser Leu Leu Ala Lys Thr Met Arg Ile  
 35 40 45  
 Tyr Ser Thr Asn Tyr Arg Leu Leu Ile Thr Gly Thr Pro Leu Gln Asn  
 50 55 60  
 Asn Leu His Glu Leu Trp Ser Leu Leu Asn Phe Leu Leu Pro Glu Ile  
 65 70 75 80  
 Phe Ser Ser Ala Glu Thr Phe Asp Asp Trp Phe Gln Ile Ser Ala Asp  
 85 90 95  
 Asn Asp Gln Gln Glu Val Val Gln Gln Leu His Lys Val Leu Arg Pro  
 100 105 110  
 Phe Leu Leu Arg Arg Leu Lys Ser Asp Val Glu Lys Gly Leu Pro Pro  
 115 120 125  
 Lys Lys Glu Thr Ile Leu Lys Val Gly Met Ser Gln Met Gln Lys Gln  
 130 135 140

<210> 997  
 <211> 81  
 <212> PRT  
 <213> Pinus radiata

<400> 997  
 Met Gly Arg Gly Lys Ile Glu Thr Lys Lys Ile Glu Asn Ser Val Arg  
 1 5 10 15  
 Arg Gln Val Thr Phe Trp Lys Arg Arg Gly Gly Leu Met Lys Lys Ala  
 20 25 30

Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe  
                   35                  40                  45  
 Ser Gly Arg Gly Lys Leu Tyr Glu Leu Glu Thr Ser His Ser Asn Arg  
                   50                  55                  60  
 Asn Lys Tyr Ala Pro Tyr Ser Thr Ser Thr Thr His Gln Cys Arg Trp  
 65                  70                  75                  80  
 Phe

<210> 998  
 <211> 114  
 <212> PRT  
 <213> Pinus radiata

<400> 998  
 Tyr Tyr Leu Ile Val Ile Asp Ala Lys Val Ile Gln Ala Gly Leu Phe  
   1                  5                  10                  15  
 Asn Asn Thr Ser Thr Ala Gln Asp Arg Arg Glu Met Leu Glu Ile  
                   20                  25                  30  
 Met Arg Arg Gly Thr Asn Ser Leu Gly Thr Asp Val Pro Ser Glu Arg  
                   35                  40                  45  
 Glu Ile Asn Arg Leu Ala Ala Arg Ser Asp Glu Glu Phe Trp Leu Phe  
                   50                  55                  60  
 Glu Lys Met Asp Glu Glu Arg Arg Gln Lys Glu Gly Tyr Arg Ser Arg  
 65                  70                  75                  80  
 Leu Met Glu Glu His Glu Val Pro Asp Trp Val Phe Ser Val Pro Thr  
                   85                  90                  95  
 Gly Lys Asn Asp Lys Gly Val Glu Asn Met Asp Ser Asn Leu Gly Phe  
                   100                  105                  110  
 Asp Gln

<210> 999  
 <211> 183  
 <212> PRT  
 <213> Pinus radiata

<400> 999  
 Ala Asp Ser Pro His Phe Asn Glu Ala Asp Ala Ile Lys Ser Lys Ile  
   1                  5                  10                  15  
 Leu Ala His Pro Gln Tyr Pro Asn Leu Leu Gly Ala Tyr Ile Asp Cys  
                   20                  25                  30  
 Gln Lys Ile Gly Ala Pro Pro Glu Val Ala Ala Arg Leu Asp Ala Leu  
                   35                  40                  45  
 Ser His Glu Tyr Glu Asn Gln Gln His Arg Ser Ser Leu Ser Ile Gly  
                   50                  55                  60  
 Met Asp Pro Glu Leu Asp Gln Phe Met Glu Ala Tyr Cys Glu Met Leu  
 65                  70                  75                  80  
 Thr Lys Tyr His Glu Glu Leu Thr Lys Pro Phe Lys Glu Ala Met Ser  
                   85                  90                  95  
 Phe Leu Lys Lys Ile Glu Ala Gln Leu Asn Ser Leu Gly Lys Gly Thr  
                   100                  105                  110  
 Ile Arg Ile Ser Pro Ser Ala Glu Asn Asp Glu Lys Thr Glu Gly Gly  
                   115                  120                  125  
 Ala Ser Ser Glu Glu Val Glu Asp Gly Ser Gly Gly Glu Thr Asp Phe  
                   130                  135                  140  
 Gln Glu Val Asp His His Ala Val Glu Asp Arg Glu Leu Lys Asp His  
 145                  150                  155                  160  
 Leu Leu Arg Lys Tyr Ser Gly Tyr Leu Ser Ser Leu Lys Gln Glu Phe  
                   165                  170                  175  
 Met Lys Lys Lys Lys Lys Lys

180

<210> 1000  
 <211> 122  
 <212> PRT  
 <213> Pinus radiata

<400> 1000  
 Cys Lys Asn Val Phe Thr Arg Leu Gln Gly Pro Val Lys Glu Gly Arg  
 1 5 10 15  
 His Thr Ala Leu Phe Met Glu Ile Pro Lys Arg Asn Glu Asn Pro Thr  
 20 25 30  
 Tyr Tyr Arg Leu Ile Glu Asn Pro Ile Asp Ala Arg Thr Ile Glu Gln  
 35 40 45  
 Arg Leu Asp Arg Phe Ser Tyr Gly Ser Val Leu Asp Phe Ala Ala Asp  
 50 55 60  
 Val Gln Leu Met Leu Glu Asn Ala Ile Arg Phe Tyr Gly His Ser Ser  
 65 70 75 80  
 Glu Val Lys Ala Asn Ala Arg Arg Leu Gln Ala Leu Phe Phe Gln Arg  
 85 90 95  
 Met Ala Asp Ser Phe Pro Asp Asp Asn Phe Ser Ser Phe Lys Thr Arg  
 100 105 110  
 Ser Leu Val Ala Leu Gly Gln Ser Ala Asn  
 115 120

<210> 1001  
 <211> 115  
 <212> PRT  
 <213> Pinus radiata

<400> 1001  
 Leu Val Asn Ser Gly Met Ala Phe Gly Ala Lys Arg Trp Ile Ala Thr  
 1 5 10 15  
 Leu Gln Arg Gln Cys Glu Arg Leu Ala Ser Val Leu Ala Ser Asn Ile  
 20 25 30  
 Pro Ser Arg Asp Leu Gly Val Ile Pro Ser Pro Glu Gly Arg Lys Ser  
 35 40 45  
 Ile Leu Lys Leu Ala Glu Arg Met Val Thr Ser Phe Cys Ala Gly Val  
 50 55 60  
 Ser Ala Ser Thr Ala His Thr Trp Thr Thr Leu Ser Gly Ser Gly Ala  
 65 70 75 80  
 Glu Asp Val Arg Val Met Thr Arg Lys Ser Val Asp Asp Pro Gly Arg  
 85 90 95  
 Pro Pro Gly Ile Ile Leu Ser Ala Ala Thr Ser Leu Trp Leu Pro Val  
 100 105 110  
 Pro Pro Lys  
 115

<210> 1002  
 <211> 130  
 <212> PRT  
 <213> Pinus radiata

<400> 1002  
 Leu Glu Ser Gln Phe Asp Gln Ser Phe Glu Tyr Pro Pro Val Glu Gln  
 1 5 10 15  
 Leu Val Lys Gln Cys Gly Lys Phe Gly Leu Leu Glu Arg Leu Leu Lys  
 20 25 30  
 His Leu Lys Ala Gln Lys His Lys Met Leu Ile Phe Ser Gln Trp Thr  
 35 40 45  
 Lys Val Leu Asp Leu Leu Glu Tyr Tyr Leu Ser Glu Arg Gly Tyr Glu

50	55	60
Val Cys Arg Ile Asp Gly Ser Val Lys Leu Glu Asp Arg Lys Asn Gln		
65	70	75
Ile Arg Asp Phe Asn Asp Pro Asp Ser Asn Phe Cys Ile Phe Leu Leu		80
	85	90
Ser Thr Arg Ala Gly Gly Leu Gly Ile Asn Leu Thr Asp Ala Asp Thr		95
	100	105
Cys Phe Ile Tyr Asp Ser Asp Trp Asn Pro Gln Met Asp Met Gln Ala		110
	115	120
Met Asp		125
130		

&lt;210&gt; 1003

&lt;211&gt; 276

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1003

Val Lys Leu Gly Thr Thr Asn Thr Trp Leu Ser Arg Ala Val Ser Gly	
1	5
Gln His Arg Ala Gln Gln Gln Gln Gln His Tyr Ala Glu Arg Ser	10
	20
Val Glu Glu Gly Arg Lys Trp Cys Gly Cys Ala Ala Gly Ser Arg Asp	25
	30
	35
Cys Ile His Ser Asn Phe Leu Lys Leu Gln Asn Pro Ala Ser Ala Gly	40
	45
	50
Ser Ser Ser Ala Ala Ala Asn Ala Leu Ser Gly Arg Trp Leu Met Pro	55
	60
65	70
Gly Pro Leu Leu Asn Asp Lys Ile Glu Gly Arg Glu Gly Val Glu Leu	75
	80
	85
Leu Gly Gly Glu Ile Pro Gly Glu Ser Ile Met Ala Leu Ser Ala Gln	90
	95
	100
Phe Lys Thr Ala Gly Ser Ala Ala Pro Glu Arg Gly Leu Leu Asn Leu	105
	110
	115
His Ser Ala Asp Ala Val Asn Ser Asn Gly Glu Pro Val Asp Ser Gly	120
	125
	130
Gly Ala Gly Gly Asp Arg Asp Gly Gly Glu Glu Ala Glu Asp His Ala	135
	140
145	150
Ala Leu Trp Gln Ser Ala Arg Ile Lys Ala Asp Ile Val Ser His Pro	155
	160
	165
Leu Tyr Asp Gln Leu Leu Ser Ala His Leu Glu Cys Leu Arg Ile Ala	170
	175
	180
Thr Pro Lys Asp Gln His Ser Met Ile Asp Ala Gln Leu Glu Gln Ser	185
	190
	195
Gln His Val Val Thr Lys Tyr Ser Val Leu Gly Asn Asp Asn Phe Leu	200
	205
	210
Val Gly Asp Lys Lys Glu Leu Asp Gln Phe Met Thr Gln Tyr Val Leu	215
	220
225	230
Leu Leu Cys Ser Phe Lys Glu Gln Leu Gln Tyr His Val His Val His	235
	240
	245
Val Met Glu Ala Val Arg Ala Cys Ile Asp Leu Gln His Ser Leu Leu	250
	255
	260
Thr Leu Thr Gly	265
275	270

&lt;210&gt; 1004

&lt;211&gt; 123

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1004

Ser Cys Ala Val Gln Ser Gln Pro Ala Ala Ser Gly Thr Arg Trp Asn  
 1 5 10 15  
 Pro Thr Pro Asp Gln Ile Arg Ile Leu Glu Met Phe Tyr Lys Gly Gly  
 20 25 30  
 Met Arg Thr Pro Asn Ala Glu Gln Ile Glu His Ile Thr Ala Gln Leu  
 35 40 45  
 Arg Gln Tyr Gly Lys Ile Glu Gly Lys Asn Val Phe Tyr Trp Phe Gln  
 50 55 60  
 Asn His Lys Ala Arg Glu Arg Gln Lys Gln Lys Arg Asn Ser Ser Met  
 65 70 75 80  
 His Gln Val Ala Ala Thr Ala Ala Lys Lys Thr Pro Thr Thr Ile Met  
 85 90 95  
 Ala Asp Asn Pro Asn Glu Leu His Lys Pro Asn Ser Asn Gly Thr Tyr  
 100 105 110  
 Ser Leu Tyr Asn Leu Pro Phe Thr Ala Met Ser  
 115 120

<210> 1005  
 <211> 90  
 <212> PRT  
 <213> Pinus radiata

<400> 1005  
 Met Gly Lys Thr Lys Met Glu Ile Lys Arg Ile Gln Asn Pro Ser Arg  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Lys Asn Gly Leu Leu Lys Lys Ala  
 20 25 30  
 Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe  
 35 40 45  
 Ser Glu Thr Gly Lys Ile Cys Glu Phe Ala Ser His Asp Asp Met Ala  
 50 55 60  
 Thr Ile Leu Glu Lys Tyr Arg Ile Tyr Thr Glu Thr Asp Gly Asn Met  
 65 70 75 80  
 Glu Ser Ser Ser Val Gln Ser Val Lys Val  
 85 90

<210> 1006  
 <211> 123  
 <212> PRT  
 <213> Pinus radiata

<400> 1006  
 Met Ser Val Phe Glu Thr Gly Asn Glu Arg Lys Arg Pro Ala Gly Asn  
 1 5 10 15  
 Ser Tyr Ser Ala Leu Glu Leu Ser Asp Asp Ile Gly Asp Glu Asp Gly  
 20 25 30  
 Ser Asp Asp Cys Ile His Leu Gly Lys Lys Arg Arg Leu Thr Leu  
 35 40 45  
 Glu Gln Val Arg Ala Leu Glu Lys Asn Phe Glu Met Ala Asn Lys Leu  
 50 55 60  
 Glu Pro Glu Lys Lys Met Gln Leu Ala Lys Ala Leu Gly Leu Gln Pro  
 65 70 75 80  
 Arg Gln Ile Ala Val Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr  
 85 90 95  
 Lys Gln Leu Glu Lys Asp Phe Asn Ile Leu Lys His Asp Tyr Asp Ser  
 100 105 110  
 Leu Lys Gln Asn Tyr Asp Asn Leu Met Glu Glu  
 115 120

<210> 1007  
 <211> 114

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1007

Met	Gly	Lys	Thr	Lys	Met	Glu	Met	Lys	His	Ile	Gln	Asn	Pro	Ser	Arg
1				5					10					15	
Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Lys	Asn	Gly	Leu	Leu	Lys	Lys	Ala
			20					25					30		
Phe	Glu	Leu	Ser	Val	Leu	Cys	Asp	Ala	Glu	Val	Ala	Leu	Ile	Ile	Phe
		35					40					45			
Ser	Glu	Thr	Gly	Lys	Ile	Ser	Glu	Phe	Ala	Ser	His	Asn	Asp	Met	Ala
	50					55					60				
Thr	Ile	Leu	Glu	Lys	Tyr	Arg	Ile	Tyr	Thr	Gln	Thr	Glu	Thr	Asp	Gly
65					70					75					80
Asn	Met	Gly	Ala	Ser	Ser	Val	Gln	Ser	Val	Lys	Val	Gly	Glu	Ser	Gln
				85					90					95	
Leu	Lys	Ala	Leu	His	Glu	Arg	Met	Asp	Asn	Leu	Lys	Lys	Lys	Glu	Arg
			100					105						110	

Asn Met

&lt;210&gt; 1008

&lt;211&gt; 90

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1008

Met	Ala	Ser	Asn	Gly	Ile	Met	Phe	Asn	Ala	Ser	Asn	Arg	Asn	Leu	Ile
1				5					10					15	
Val	Met	Val	Asn	Glu	Ala	Pro	Ser	Phe	Glu	Ala	Asn	Ser	Ser	Leu	Asp
			20					25					30		
Gly	Val	Met	Lys	Asn	Val	Ser	Lys	Arg	Pro	Phe	Tyr	Asn	Thr	Leu	Asp
		35					40					45			
Ala	Asp	Glu	Ala	Gly	Asp	Glu	Asp	Leu	Leu	Asp	Glu	Cys	Val	His	Gln
	50					55				60					
Pro	Gly	Lys	Lys	Arg	Arg	Leu	Ser	Val	Glu	Gln	Val	Arg	Phe	Leu	Glu
65					70					75					80
Lys	Ser	Phe	Glu	Leu	Asp	Asn	Lys	Leu	Glu						
				85					90						

&lt;210&gt; 1009

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1009

Leu	Glu	Arg	Ser	Ile	Arg	Gln	Gln	Arg	Ala	Phe	His	His	Leu	Gly	Leu
1				5					10					15	
Met	Glu	Gln	His	Pro	Trp	Arg	Pro	Gln	Arg	Gly	Leu	Pro	Glu	Arg	Ser
			20					25					30		
Val	Ser	Val	Leu	Arg	Ala	Trp	Leu	Phe	Glu	His	Phe	Leu	His	Pro	Tyr
		35					40					45			
Pro	Thr	Asp	Ala	Asp	Lys	His	Ile	Leu	Ala	Lys	Gln	Thr	Gly	Leu	Thr
	50					55					60				
Arg	Ser	Gln	Val	Ser	Asn	Trp	Phe	Ile	Asn	Ala	Arg	Val	Arg	Leu	Trp
65					70					75					80
Lys	Pro	Met	Val	Glu	Met	Tyr	Met	Glu	Glu	Leu	Lys	Glu	Glu	Lys	
				85				90					95		
Val	Asp	Gln	Gly	Thr	His	Asn	Ser	Glu	Ala	Glu					
			100					105							

<210> 1010  
 <211> 126  
 <212> PRT  
 <213> Pinus radiata

<400> 1010  
 Met Asn Leu Asn Asp His Thr Tyr Asn Leu Ser Pro Met Ala Asn Ser  
 1 5 10 15  
 Gly Asn Pro Glu Glu Gln Ile Asp Glu Asp Ala Val Asp Asp Phe Met  
 20 25 30  
 Asn Tyr Gln Pro Glu Ser Lys Lys Arg Arg Leu Thr Val Glu Gln Val  
 35 40 45  
 Arg Ser Leu Glu Arg Ser Phe Glu Ile Glu Thr Lys Leu Glu Pro Glu  
 50 55 60  
 Lys Lys Ile Gln Leu Ala Gln Glu Leu Gly Leu Gln Pro Arg Gln Val  
 65 70 75 80  
 Ala Ile Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Leu  
 85 90 95  
 Glu Arg Asp Tyr Ser Val Leu Lys Ala Ser Tyr Asp Ala Leu Lys Ser  
 100 105 110  
 Asp Phe Glu Arg Leu Gln Gln Glu Asn Lys Asn Ile Arg Ala  
 115 120 125

<210> 1011  
 <211> 96  
 <212> PRT  
 <213> Pinus radiata

<400> 1011  
 Met Phe Thr Ile Ser Thr Cys Thr Thr His Ala Gln Ser Leu Ile Tyr  
 1 5 10 15  
 Ser Phe Val Ala Arg Gly Thr Val Val Leu Ala Glu Tyr Thr Glu Phe  
 20 25 30  
 Lys Gly Asn Phe Thr Gly Ile Ala Ala Gln Cys Leu Gln Lys Leu Pro  
 35 40 45  
 Ala Ser Asn Asn Lys Phe Thr Tyr Asn Cys Asp Asn His Thr Phe Asn  
 50 55 60  
 Tyr Leu Asp Glu Asp Gly Phe Ala Tyr Cys Val Val Ala Asp Glu Ser  
 65 70 75 80  
 Val Gly Arg Gln Val Pro Met Ala Phe Leu Glu Arg Val Lys Glu Asp  
 85 90 95

<210> 1012  
 <211> 110  
 <212> PRT  
 <213> Pinus radiata

<400> 1012  
 Gly Cys Pro Gly Asn Ile His Asp Asp Asp Glu Glu Glu Asp Glu Glu  
 1 5 10 15  
 Glu Cys Ser Gly Thr Gly Gln Gln Thr Arg Lys Lys Arg Arg Leu Ser  
 20 25 30  
 Leu Gln Gln Val Arg Ser Leu Glu Lys Thr Phe Glu Val Glu Asn Lys  
 35 40 45  
 Leu Glu Pro Glu Arg Lys Leu Gln Leu Ala Gln Glu Leu Gly Leu Gln  
 50 55 60  
 Pro Arg Gln Val Ala Val Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys  
 65 70 75 80  
 Thr Lys Gln Leu Glu Arg Asp Tyr Gly Gln Leu Lys Leu Asn Phe Glu  
 85 90 95  
 Cys Leu Lys Ser Asn Phe Asp Ala Ile Lys Gln Glu Asn Gln



100 105 110

<210> 1013  
 <211> 108  
 <212> PRT  
 <213> Pinus radiata

<400> 1013  
 Met Ala Gly Glu Lys Arg Lys Ile Asn Arg Ile Ala Asn Ala Ser Ala  
 1 5 10 15  
 Arg Gln Val Thr Phe Ala Lys Arg Arg Gly Leu Phe Lys Lys Ala  
 20 25 30  
 Gln Glu Leu Ser Ile Leu Cys Glu Ala Asp Val Ala Leu Leu Val Phe  
 35 40 45  
 Ser Ser Thr Gly Lys Leu Tyr Gln Tyr Ser Ser Ser Ser Met Lys Met  
 50 55 60  
 Ile Leu Asp Gln Tyr Ile Leu Tyr Ser Arg Ser Ile Gln Lys Asp Gly  
 65 70 75 80  
 Lys Pro Asn Leu Glu Ser His Asp Ile Gln Lys Ile Lys Gln Gln  
 85 90 95  
 Ile Lys Asp Ile Ser Gln Asn Leu Arg Lys Leu Arg  
 100 105

<210> 1014  
 <211> 177  
 <212> PRT  
 <213> Pinus radiata

<400> 1014  
 Met Gly Met Asp Met Glu Asp Cys Asn Thr Gly Leu Gly Leu Gly Met  
 1 5 10 15  
 Ser Ile Gly Leu Gly Met Asn Leu Met Arg Glu Asp Leu Gln Ser His  
 20 25 30  
 Arg His His Val Asn Gly Pro Pro Val Gln Leu Asp Leu Leu Pro Leu  
 35 40 45  
 Ala Pro Val Leu Pro Ser Arg Asp Leu Pro Trp Gly Lys Thr Ser Pro  
 50 55 60  
 Gly Thr Asp Gly Glu Arg Ser Ala Gly Glu Ser Lys Ala Thr Val Pro  
 65 70 75 80  
 Arg Arg Ile Asp Val Asn Lys Leu Pro Ala Ser Cys Tyr Tyr Asn Glu  
 85 90 95  
 Asp Thr Gly Thr Ile Asn Val Ser Ser Pro Asn Ser Ala Leu Ser Ser  
 100 105 110  
 Phe His Val Asp Ser Gly Gly Ala Ile Asn Ala Glu Ser Ser Cys Tyr  
 115 120 125  
 Gly Met Ser Val Lys Arg Glu Arg Glu Ala Thr Glu Glu Leu Glu Ala  
 130 135 140  
 Glu Arg Ala Cys Ser Arg Val Ser Asp Glu Glu Ala Asp Gln Glu Gly  
 145 150 155 160  
 Gly Thr Arg Lys Lys Leu Arg Leu Ser Lys Glu Gln Ser Ala Leu Leu  
 165 170 175  
 Glu

<210> 1015  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata

<400> 1015  
 Met Gly Lys Lys Leu Glu Leu Lys Arg Ile Gln Asn Pro Asn Ser Ser

```

      1           5           10           15
Arg Asp Ser Phe Ser Lys Cys Lys Arg Gly Leu Leu Lys Lys Ser Val
      20           25           30
Lys Leu Phe Val Leu Cys Asp Ala Glu Val Ser Leu Ile Ile Leu Ser
      35           40           45
Glu Thr Ala Lys Ile Tyr Glu Phe Ala Ser Asn Lys Ser
      50           55           60

```

<210> 1016  
 <211> 51  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 1016
Arg Phe Gln Ala Gln Asp Phe Gln Lys Gln Gly Thr Gln Leu Arg Arg
      1           5           10           15
Lys Met Trp Phe Gln Asn Met Lys Val Lys Leu Val Val Leu Gly Ile
      20           25           30
Val Phe Val Leu Ile Leu Ile Ile Trp Leu Ser Ile Cys His Gly Phe
      35           40           45
Lys Cys His
      50

```

<210> 1017  
 <211> 68  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 1017
Met Gly Gln Gln Ser Leu Ile Tyr Ser Phe Val Ala Arg Gly Thr Val
      1           5           10           15
Val Leu Ala Glu Tyr Thr Gln Phe Thr Gly Asn Phe Thr Thr Ile Ala
      20           25           30
Asn Gln Cys Leu Gln Lys Ile Pro Ala Ser Asn Asn Lys Phe Thr Tyr
      35           40           45
Asn Cys Asp Arg His Thr Phe Asn Tyr Leu Val Glu Asp Gly Ser His
      50           55           60
Thr Val Leu Leu
      65

```

<210> 1018  
 <211> 155  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 1018
Met Asp Arg Glu Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly
      1           5           10           15
Gly Lys Gly Thr Met Arg Arg Lys Lys Lys Thr Ile His Lys Thr Ala
      20           25           30
Thr Ala Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Ile Gly Val
      35           40           45
Asn Asn Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Asp His
      50           55           60
Val Ile His Phe Ala Asn Pro Lys Val Gln Ala Ser Ile Ala Ala Asn
      65           70           75           80
Thr Trp Val Val Ser Gly Ser Ser Gln Thr Lys Lys Leu Gln Asp Leu
      85           90           95
Phe Pro Gly Ile Ile Asn Gln Leu Gly Pro Glu Ser Phe Ala Asn Leu
      100           105           110
Arg Lys Ile Ala Asp Gln Phe Arg Arg Pro Glu Pro Asn Pro Ala Gln

```



Val Tyr

<210> 1021  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

<400> 1021  
 Arg Gln Glu Pro Ser Leu Lys Lys Gln Ile Ile Glu Thr Ser Glu Lys  
 1 5 10 15  
 Ala Ile Val Phe Ser Gln Trp Thr Ser Met Leu Asp Leu Leu Glu Val  
 20 25 30  
 Pro Leu Lys Lys Ser Cys Ile Gln Tyr Arg Arg Leu Asp Gly Thr Met  
 35 40 45  
 Ser Val Ile Ala Arg Asp Lys Ala Val Asn Asp Phe Lys Thr Leu Pro  
 50 55 60  
 Glu Val Thr Val Met Ile Met Ser Leu Lys Ala Ala Ser Leu Gly Leu  
 65 70 75 80  
 Asn Met Val Ala Ala Ser His Val Leu Leu Asp Leu Trp Val Glu  
 85 90 95  
 Ser Gln Gln Leu Lys Thr Lys Leu Leu Thr Gly  
 100 105

<210> 1022  
 <211> 99  
 <212> PRT  
 <213> Pinus radiata

<400> 1022  
 Leu Gly Phe Glu Asp Tyr Val Glu Pro Leu Lys Ile Tyr Leu Asn Lys  
 1 5 10 15  
 Tyr Arg Glu Leu Glu Gly Glu Lys Ser Ser Met Ala Ala Pro Pro Arg  
 20 25 30  
 Gln Ser Asp Leu Gln Gln His His His Val Asn Gly Ser Asp Pro His  
 35 40 45  
 Pro Tyr Gly His Ser Pro His Gly Pro Met Ala Tyr His Val Pro Gly  
 50 55 60  
 Gly Ala Ser Phe Arg Ala Trp Lys Val Thr Val Ala Cys Ser Phe Cys  
 65 70 75 80  
 Tyr Cys Lys Glu Val Ile Glu Met Glu Met Gly His Gly Asn Gly Asp  
 85 90 95  
 Cys Lys Val

<210> 1023  
 <211> 158  
 <212> PRT  
 <213> Pinus radiata

<400> 1023  
 Met Glu Asn Leu Pro Asn Gln Gln Pro Asp Leu Glu Ile Ala Gln Thr  
 1 5 10 15  
 His Glu Asp Pro Gly Ser Arg Gln Phe Lys Gly Ile Arg Leu Arg Lys  
 20 25 30  
 Trp Gly Arg Trp Val Ser Glu Ile Arg Ile Pro Lys Ser Arg Glu Lys  
 35 40 45  
 Ile Trp Leu Gly Ser Tyr Thr Thr Pro Glu Gln Ala Ala Arg Ala Tyr  
 50 55 60  
 Asp Ala Ala Val Tyr Cys Leu Lys Gly Pro Asn Ala Lys Phe Asn Phe  
 65 70 75 80

Pro Glu Thr Val His Asp Ile Pro Ser Val Thr Ser Val Ser Arg Gln  
                             85                            90                            95  
 Glu Ile Gln His Ala Ala Leu Lys Tyr Ala Leu Gly Gln Pro Pro Pro  
                             100                            105                            110  
 Ser Leu Gln Ser Leu Glu Gly His Ala Ala Leu Lys Tyr Ala Leu Gly  
                             115                            120                            125  
 Gln Pro Pro Pro Ser Leu Gln Ser Leu Glu Gly His Ala Ala Leu Lys  
                             130                            135                            140  
 Tyr Ala Leu Gly Gln Pro Pro Ser Leu Gln Ser Leu Gln  
 145                            150                            155

<210> 1024  
 <211> 197  
 <212> PRT  
 <213> Pinus radiata

<400> 1024  
 Met Ala Phe Thr Gly Thr Gln Gln Lys Cys Lys Ala Cys Asp Lys Thr  
   1                            5                            10                            15  
 Val Tyr Phe Val Asp Gln Leu Ser Ala Asp Gly Val Ser Tyr His Lys  
                             20                            25                            30  
 Ala Cys Phe Arg Cys Asn His Cys Lys Gly Thr Leu Lys Leu Ser Asn  
                             35                            40                            45  
 Tyr Ser Ser Met Glu Gly Val Leu Tyr Cys Lys Pro His Phe Asp Gln  
                             50                            55                            60  
 Leu Phe Arg Glu Ser Gly Asn Phe Asn Lys Asn Phe Gln Ser Gln Arg  
   65                            70                            75                            80  
 Ser Ser Lys Ala Ile Asp Gly Leu Ser Pro Glu Met Thr Arg Ser Pro  
                             85                            90                            95  
 Ser Lys Val Ser Met Met Phe Ser Gly Thr Gln Asp Lys Cys Ala Thr  
                             100                            105                            110  
 Cys Gly Lys Thr Ala Tyr Pro Leu Glu Lys Val Thr Val Glu Asn Leu  
                             115                            120                            125  
 Ser Tyr His Lys Ser Cys Phe Arg Cys Ser His Gly Gly Cys Ser Ile  
                             130                            135                            140  
 Ser Pro Ser Asn Tyr Ala Ala Leu Glu Gly Ile Leu Tyr Cys Lys His  
   145                            150                            155                            160  
 His Phe Ser Gln Leu Phe Lys Glu Lys Gly Ser Tyr Asn His Leu Ile  
                             165                            170                            175  
 Lys Thr Ala Ser Met Lys Arg Ala Ala Val Pro Glu Val Ala Ser  
                             180                            185                            190  
 Ala Val Pro Glu Ile  
                             195

<210> 1025  
 <211> 232  
 <212> PRT  
 <213> Pinus radiata

<400> 1025  
 Lys Pro Ala Gly Thr Ser Arg Leu Pro Glu Phe Lys Ser Arg Thr Ile  
   1                            5                            10                            15  
 Thr Leu Pro Ser Phe Asn Ile Pro Ser Ser Asn Pro Arg Lys Leu Leu  
                             20                            25                            30  
 Asp Met Val Lys Pro Ser Gln Lys Gln Asn Ile His Val Asn Gly Lys  
                             35                            40                            45  
 Pro Glu Ser Arg Ser Leu Met Ser Arg Gln Phe Lys Gly Ile Arg Leu  
                             50                            55                            60  
 Arg Lys Trp Gly Lys Trp Val Ser Glu Ile Arg Met Pro Asn Cys Arg  
   65                            70                            75                            80  
 Ala Lys Ile Trp Leu Gly Ser Tyr Glu Ser Pro Glu Lys Ala Ala Arg

```

      85      90      95
Ala Tyr Asp Phe Ala Ala Tyr Cys Leu Arg Gly Ser Lys Ala Arg Phe
      100      105      110
Asn Phe Pro Asp Ser Pro Pro Glu Ile Pro Cys Ala Ser Ser Leu Ser
      115      120      125
Pro Ser Gln Ile Gln Ala Gly Ala Ala Arg Phe Ala Ala Glu Glu Phe
      130      135      140
Gln Met Pro Ser Asp Asp Asp Thr Ala Ser Ser Ser Cys Gly Ser Glu
      145      150      155      160
Ala Glu Ser Asp Leu Pro Pro Glu Ile Pro Cys Ala Ser Ser Val Ser
      165      170      175
Pro Pro Pro Ile Gln Ala Ala Ala Pro Arg Phe Ala Ala Glu Glu Phe
      180      185      190
Arg Leu Pro Ser Asp Glu Asp Thr Ala Ser Ser Ser Cys Gly Ser Val
      195      200      205
Thr Glu Ser Asn Ile Asp Ser Gln Gln Ile Ser Ala Glu Gln Gly Ser
      210      215      220
Ala Phe Trp Asp Ser Leu Phe Leu
      225      230

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<210> 1026  
 <211> 88  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 1026
His Gln Trp His Arg Phe Cys Ser Arg Arg Leu Cys Cys Thr Ala Leu
  1      5      10      15
His Asn Thr Gln Lys Gln Cys Thr Lys Ser Ala Ala Thr Gly Lys Gly
      20      25      30
Gly Ile Lys Arg Ile Arg Arg Gln Gln Glu Ala Ala Pro Ser Pro Pro
      35      40      45
Glu Glu Ala Thr Leu Asn Gln Gln Thr Pro Pro Tyr Arg Gly Val Arg
      50      55      60
Arg Arg Asn Trp Gly Lys Trp Val Ser Glu Ile Arg Glu Pro Lys Lys
      65      70      75      80
Lys Thr Arg Ile Trp Leu Gly Ser
      85

```

<210> 1027  
 <211> 501  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 1027
Met Cys Gly Gly Ala Ile Ile Ser Asp Phe Ile Ile Pro Pro Ala Ser
  1      5      10      15
Arg Gly Arg Arg Val Thr Ala Arg Asp Ile Trp Pro Asp Phe Asp Lys
      20      25      30
Phe Ser Glu Phe Ile Asn Gly Gly Ala Ala Val Glu Ser Phe Asp Val
      35      40      45
Ser Val Asp Val Asp Asp Asp Glu Glu Asp Ser Asp Asp Asp Glu Phe
      50      55      60
Leu Asp Phe Glu Glu Ser Tyr Gln Asn Lys Lys Lys Lys Gln Gln Gln
      65      70      75      80
Pro Ile Ser Pro Thr Lys Gly Phe Glu Leu Pro Leu Ala Arg Gly Leu
      85      90      95
Asp Gly Pro Ala Ala Lys Ser Ala Val Arg Lys Arg Lys Asn Leu Tyr
      100      105      110
Arg Gly Ile Arg Gln Arg Pro Trp Gly Lys Trp Ala Ala Glu Ile Arg
      115      120      125

```

Asp Pro Arg Lys Gly Ala Arg Val Trp Leu Gly Thr Phe Asn Thr Ala  
 130 135 140  
 Glu Glu Ala Ala Arg Ala Tyr Asp Ala Ala Arg Lys Ile Arg Gly  
 145 150 155 160  
 Lys Lys Ala Lys Val Asn Phe Val Asp Glu Pro Pro Pro Ser Val Lys  
 165 170 175  
 Lys Glu Ser Asn Asn Ala Lys Gly Ser Lys Lys Gly Ser Ser Lys Lys  
 180 185 190  
 Ile Lys Ser Tyr Thr Thr Pro Lys Ala Asp Phe Phe Glu Gly Phe Lys  
 195 200 205  
 Thr Ala Asn Pro Ser Ile Ala Gln Tyr Asn Phe His Gln Lys Phe Pro  
 210 215 220  
 Asn Pro Ser Cys Asp Asp Leu Gly Tyr Gln Asn Pro Leu Ser Pro Leu  
 225 230 235 240  
 His Ala Ile Cys Asn Arg Asn Phe Ala Ala Lys Gln Ser Ser Ser Ala  
 245 250 255  
 Leu Pro Ala Tyr Ser Thr Glu Phe Ser Asp Phe Asp Asp Ser Glu Val  
 260 265 270  
 Asp Asn Leu Val Pro Gln Pro Ala Ser Phe Glu Pro Met Lys Asn Ile  
 275 280 285  
 Asn Lys Arg Lys Gly Tyr Asn Ser Phe Glu Ser Asp Thr Ser Ser Val  
 290 295 300  
 Ser Ala Asp Arg Ser His Ile Ser Trp Val Thr Glu Val Lys Thr Pro  
 305 310 315 320  
 Glu Ile Ser Ser Val Pro Lys Ala Glu Ala Asp Ser Asp His Tyr Asp  
 325 330 335  
 Phe Ala Asp Met Ser Thr Pro Val Ala Thr Ser Val Ser Ala Gly Ser  
 340 345 350  
 Pro Glu Val Gln Leu Pro Pro Phe Asn Asn Gly Leu Asn Lys Ser Pro  
 355 360 365  
 Ser Val Glu Asp Gly Val Ala Ala Glu Lys Ser Pro Lys Leu Glu Glu  
 370 375 380  
 Ser Ser Gln Leu Glu Ile Ser Glu Asp Leu Pro Ser Leu Glu Ser Tyr  
 385 390 395 400  
 Pro Trp Leu Phe Gln Met Pro Tyr Phe Glu Gly Leu Asp Gln Ser Leu  
 405 410 415  
 Gln Gly Val Gly Ile Gly Asp Ala Ser Phe Pro Asp Gly Glu Asn Asp  
 420 425 430  
 Leu Gln Leu Trp Ser Phe Asp Ala Val Pro Ile Ser Asp Ser Ala Tyr  
 435 440 445  
 Ile Ser Leu Glu Ser Leu Ala Cys Lys Gln Leu Val Ile Met Glu Ser  
 450 455 460  
 Arg Arg Leu Val Met Ala Ser Phe Cys Arg Pro Ser Ser Asn Arg Glu  
 465 470 475 480  
 Leu Val Ile Phe Pro Leu Phe Phe Phe Ile Gln Phe Asp Gly Ala Thr  
 485 490 495  
 Val Ile Ser Ala His  
 500

&lt;210&gt; 1028

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1028

Met Ala Phe Ala Gly Thr Gln Gln Lys Cys Lys Ala Cys Glu Lys Thr  
 1 5 10 15  
 Val Tyr Val Val Asp Gln Leu Thr Ala Asp Gly Ser Val Phe His Lys  
 20 25 30  
 Ala Cys Phe Arg Cys His His Cys Asn Gly Thr Leu Lys Leu Ser Asn  
 35 40 45

Tyr Ser Ser Phe Glu Gly Val Leu Tyr Cys Lys Pro His Phe Asp Gln  
 50 55 60  
 Leu Phe Lys Arg Thr Gly Ser Leu Asp Lys Ser Phe Glu Gly Thr Pro  
 65 70 75 80  
 Lys Ala Val Lys Asn Glu Lys Leu Asn Asp Gly Glu Ile Lys Thr Pro  
 85 90 95  
 Asn Arg Val Ser Ala Leu Phe Ser Gly Thr Gln Glu Lys Cys Leu Ala  
 100 105 110  
 Cys Gly Asn Thr Val Tyr Pro Ile Glu Lys Val Ser Val Glu Gly Val  
 115 120 125  
 Gly Tyr His Lys Ala Cys  
 130

<210> 1029  
 <211> 76  
 <212> PRT  
 <213> Pinus radiata

<400> 1029  
 Met Asp Gly Ser Gln Asn Ser Gly Gly Asn Ala Val Pro Pro Phe Leu  
 1 5 10 15  
 Thr Lys Thr Tyr Asp Met Val Asp Asp Ser Ser Thr Asp Ser Ile Val  
 20 25 30  
 Ser Trp Ser Pro Gly Asn Asn Ser Phe Ile Val Trp Asn Pro Pro Glu  
 35 40 45  
 Phe Ala Arg Asp Leu Leu Pro Lys Tyr Phe Lys His Asn Asn Phe Ser  
 50 55 60  
 Ser Phe Val Arg Gln Leu Asn Thr Tyr Gly Phe Arg  
 65 70 75

<210> 1030  
 <211> 97  
 <212> PRT  
 <213> Pinus radiata

<400> 1030  
 His Glu Lys Lys Ala Val Leu Trp Asn Met Asp Thr Leu Lys Ala Lys  
 1 5 10 15  
 Gly Ser Leu Glu His Ser Phe Leu Ile Thr Asp Val Arg Phe Ser  
 20 25 30  
 Pro Asn Ser Thr Arg Leu Ala Thr Ser Ser Phe Asp Arg Thr Val Lys  
 35 40 45  
 Val Trp Asp Ala Asp Asn Pro Asn Tyr Thr Leu Arg Thr Phe Ser Gly  
 50 55 60  
 His Thr Gly Ser Val Met Ser Leu Asp Phe His Pro Asn Asn Glu Asp  
 65 70 75 80  
 Leu Ile Cys Ser Cys Asp Gly Glu Ser Glu Val Arg Tyr Trp Ser Val  
 85 90 95  
 Asn

<210> 1031  
 <211> 117  
 <212> PRT  
 <213> Pinus radiata

<400> 1031  
 Met Gly Tyr Leu Gln Glu Leu Glu Asp Gln Ile Ile Gly Leu Gln Asn  
 1 5 10 15  
 Leu Val Lys Arg Asn Glu Arg Leu Tyr Gly Ser Gly Asn Thr Pro Ser  
 20 25 30



Gly Gly Val Ala Leu Pro Phe Ile Leu Val Gln Thr Arg Pro Gln Ala  
 35 40 45  
 Thr Val Glu Ile Glu Ile Ser Glu Asp Met Gln Leu Val His Phe Asp  
 50 55 60  
 Phe Asn Ser Thr Pro Phe Glu Leu His Asp Asp Ala Tyr Val Leu Lys  
 65 70 75 80  
 Ala Met Gly Phe Cys Glu Lys Pro Phe Thr Asp Gly Met Asp Val Thr  
 85 90 95  
 Gly His Asp Ser Phe Ala Asn Gly Thr Gly Phe Gly Glu Asn Asn Met  
 100 105 110  
 Thr Ile Thr Asn Met  
 115

&lt;210&gt; 1032

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1032

Thr Arg Val Leu Leu Ile Asp Asp His Pro Leu Phe Arg Glu Gly Leu  
 1 5 10 15  
 Ala Gly Ala Ile Gln Ala Glu Pro Asp Phe Glu Val Val Gly Gln Ala  
 20 25 30  
 Gly Thr Val Asp Glu Leu Arg Gly Leu Ala Pro Gln Ile Glu Pro Asp  
 35 40 45  
 Val Ala Ile Val Asp Leu Leu Met Pro Ser Val Ser Gly Ile Gly Val  
 50 55 60  
 Thr Arg Glu Leu Cys Glu Leu Leu Pro Arg Cys Arg Val Leu Gly Leu  
 65 70 75 80  
 Ser Ala Val Val Asp Ala Ala Ala Ile Ala Glu Met Leu Arg Ala Gly  
 85 90 95  
 Ala Ser Gly Phe Ala Leu Lys Thr Gln Pro Ala Pro Asp Ile Leu Asp  
 100 105 110  
 Ala Val Arg Arg Thr Val Ala Gly Glu Ser Tyr Leu Pro Pro Ser Val  
 115 120 125  
 Ser Arg Glu Ala Ile Asp Ala Glu Leu Ala Gly Gly Ala Pro Pro Ser  
 130 135 140  
 Leu Ala  
 145

&lt;210&gt; 1033

&lt;211&gt; 181

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1033

Met Ser Ile Leu Pro Lys Ser Asp Ser Ile His Ile Arg Glu Val Trp  
 1 5 10 15  
 Ala Asp Asn Leu Glu Glu Glu Phe Asn Leu Ile Arg Glu Ile Val Asp  
 20 25 30  
 Asp Tyr Pro Leu Ile Ala Met Asp Thr Glu Phe Pro Gly Ile Val Val  
 35 40 45  
 Arg Pro Val Gly Lys Phe Arg Thr Val Gln Glu Tyr Asn Tyr Glu Thr  
 50 55 60  
 Leu Arg Ser Asn Val Asp Val Leu Lys Leu Ile Gln Leu Gly Leu Thr  
 65 70 75 80  
 Phe Ser Asp Glu Asp Gly Asn Leu Pro Asn Cys Gly Thr Asp Arg Tyr  
 85 90 95  
 Cys Val Trp Gln Phe Asn Phe Arg Glu Phe Asn Ile Trp Glu Asp Ala  
 100 105 110  
 Tyr Ala Ser Asp Ser Ile Glu Leu Leu Arg Gln Ser Gly Ile Asp Phe

115 120 125  
 Lys Lys Asn Ser Glu Arg Gly Val Asp Ser His Leu Phe Ala Glu Leu  
 130 135 140  
 Leu Met Ser Ser Gly Ile Val Leu Asn Glu Asn Val Arg Trp Ile Thr  
 145 150 155 160  
 Phe His Ser Gly Tyr Asp Phe Gly Tyr Leu Leu Lys Leu Val Met Asn  
 165 170 175  
 Arg Ser Leu Pro Pro  
 180

<210> 1034  
 <211> 122  
 <212> PRT  
 <213> Pinus radiata

<400> 1034  
 Glu His Ala Cys Pro Met Ala Cys His Pro Gly Pro Cys Pro Pro Cys  
 1 5 10 15  
 Leu Val Ser Val Ser Lys Ser Cys Trp Cys Gly Ser Lys Thr Leu Val  
 20 25 30  
 Ser Arg Cys Ser Val Leu Asn Lys Gly Thr Ser Thr Asn Ala Gly Val  
 35 40 45  
 Gly Pro Val Leu Ser Cys Gly Gln Pro Cys Gly Arg Leu Leu Gly Cys  
 50 55 60  
 Glu Lys His Thr Cys Glu Gln Glu Cys His Pro Gly Pro Cys Pro Pro  
 65 70 75 80  
 Cys Asp Ile Val Asp Val Ala Lys Cys Tyr Cys Gly Arg Gln Glu Arg  
 85 90 95  
 Gly Met Ala Cys Gly Thr Gly Ile Val Glu Thr Cys Val Val Glu Gly  
 100 105 110  
 Glu Gly Ser Trp Glu Gly Arg Trp Gln Cys  
 115 120

<210> 1035  
 <211> 158  
 <212> PRT  
 <213> Pinus radiata

<400> 1035  
 Met Arg Ile Asn Glu Ala Thr Pro Lys Lys Ser Leu Gly Phe Gln Gln  
 1 5 10 15  
 Pro Tyr Ser Met Lys Gly Asn Tyr Tyr Thr Gln Ala Tyr Gly Gly Ala  
 20 25 30  
 Val Ala Ser Gln Ala Phe Gln Ser Asp Asn Asp Pro Asn Asn Thr Thr  
 35 40 45  
 Ile Phe Val Gly Gly Leu Asp Pro Asn Ala Thr Asp Glu Asp Leu Arg  
 50 55 60  
 Gln Val Phe Gly Pro Tyr Gly Glu Ile Val Tyr Val Lys Ile Pro Val  
 65 70 75 80  
 Gly Lys Gly Cys Gly Phe Val Gln Phe Thr Asn Arg Ser Ser Ala Glu  
 85 90 95  
 Glu Ala Leu Gln Lys Leu His Gly Thr Val Ile Gly Gln Gln Ser Ile  
 100 105 110  
 Arg Leu Ser Trp Gly Arg Ser Pro Ala Asn Lys Gln Thr Ala Ser Trp  
 115 120 125  
 Gly Val Gln Pro Gln Ala Asp Pro Asn Gln Trp Asn Gly Gly Gly Ala  
 130 135 140  
 Tyr Tyr Gly Tyr Gly Gln Gly Tyr Glu Ala Tyr Gly Tyr Ala  
 145 150 155

<210> 1036

<211> 126  
 <212> PRT  
 <213> Pinus radiata

<400> 1036  
 Gln Tyr Leu Ser Pro Gly Lys Ser Ala Pro Phe Trp Leu Cys Gln Asp  
 1 5 10 15  
 Met Ala Ile Thr Ser Gln Gln His His Met Asn Ala Leu Pro Tyr Asn  
 20 25 30  
 Glu Arg Ser Glu Lys Arg Pro Lys Phe Lys Gly Ile Arg Met Arg Lys  
 35 40 45  
 Trp Gly Ser Trp Gly Ser Glu Ile Arg Met Pro Lys Thr Arg Thr Lys  
 50 55 60  
 Ile Trp Leu Gly Ser Tyr Glu Thr Ala Glu Gln Ala Ala Arg Ala Tyr  
 65 70 75 80  
 Asp Ala Ala Leu Tyr Cys Leu Arg Gly Pro Asn Ala Lys Phe Asn Phe  
 85 90 95  
 Pro Asp Thr Val Pro Ser Ile Pro Ser Ala Phe Ser Leu Ser Arg His  
 100 105 110  
 Gln Ile Gln Leu Ala Ala Ala Arg Tyr Ala Arg Asp Glu Leu  
 115 120 125

<210> 1037  
 <211> 79  
 <212> PRT  
 <213> Pinus radiata

<400> 1037  
 Met Glu Pro Met Asp Ile Val Gly Lys Ser Lys Asp Asp Val Ser Leu  
 1 5 10 15  
 Pro Lys Ala Thr Met Phe Lys Ile Ile Lys Glu Met Leu Pro Pro Asp  
 20 25 30  
 Val Arg Val Ala Arg Asp Ala Gln Asp Leu Leu Val Glu Cys Cys Val  
 35 40 45  
 Glu Phe Ile Asn Leu Ile Ser Ser Glu Ser Asn Glu Val Cys Gly Arg  
 50 55 60  
 Glu Glu Lys Arg Thr Ile Ala Pro Glu His Val Leu Arg Ala Leu  
 65 70 75

<210> 1038  
 <211> 132  
 <212> PRT  
 <213> Pinus radiata

<400> 1038  
 Glu Ile Ser Leu Phe Trp Leu Gln Ser Phe Cys Lys Leu Pro Asn Met  
 1 5 10 15  
 Glu Asn Val Pro Glu Gln Glu Pro Asp Asn Thr Ile Ser Leu Pro His  
 20 25 30  
 Glu Asp Arg Gly Ser Arg Gln Phe Lys Gly Ile Arg Leu Arg Lys Trp  
 35 40 45  
 Gly Ser Trp Val Ser Glu Ile Arg Met Pro Arg Ser Arg Lys Lys Ile  
 50 55 60  
 Trp Leu Gly Ser Tyr Thr Thr Pro Glu Gln Ala Ala Arg Ala Tyr Asp  
 65 70 75 80  
 Ala Ala Val Tyr Cys Leu Arg Gly Arg Asn Ala Glu Phe Asn Phe Ser  
 85 90 95  
 Val Pro Asp Ile Pro Thr Ala Ser Pro Leu Ser Arg Glu Gln Ile Gln  
 100 105 110  
 His Ala Ala Ala Glu Tyr Ala Leu Gly Lys Ala Pro Ser Ser Phe Pro  
 115 120 125

Ser Phe Ala Gly  
130

<210> 1039  
<211> 241  
<212> PRT  
<213> Pinus radiata

<400> 1039  
Met Asn Glu Pro Asp Glu His Ala Ala Ala Gln Leu Val Gln Lys Arg  
1 5 10 15  
Ser His Pro Leu Ala Glu Val Val Met Pro Ile Ser Val Arg Pro Leu  
20 25 30  
Ala Glu Lys Cys Gly Val Glu Ala Glu Glu Glu Arg Lys Arg Ala Ala  
35 40 45  
Glu His Lys Lys Gln Arg Ser Lys Asn Trp Thr Arg Ala Glu Thr Leu  
50 55 60  
Lys Leu Ile Arg Leu Arg Ala Glu Met Glu Pro Arg Phe Ala Arg Ser  
65 70 75 80  
Gly Arg Lys Ser Glu Leu Trp Glu Glu Ile Ala Glu Ala Leu Arg Arg  
85 90 95  
Glu Ser Val Val Arg Asp Ala Gln Arg Cys Arg Asp Lys Trp Glu Lys  
100 105 110  
Leu Thr Ala Ser Tyr Lys Glu Val Arg Asp Gly Gln Arg Asp Arg Gln  
115 120 125  
Asp Phe Pro Phe Phe Asp Glu Leu Asp Pro Leu Leu Ser Leu Lys Pro  
130 135 140  
Gln Lys Ala Ala Ala Ala Ala Ala Ala Ala Thr Ala Ala Thr Ala  
145 150 155 160  
Ala Asn Phe Val Ser Ala Glu Thr Pro Ser Asn Phe Pro Thr Asp Asp  
165 170 175  
Glu Met Thr Glu Glu Gly Ser Pro Ala Gly Lys Arg Arg Lys Thr Thr  
180 185 190  
Pro Arg Gly Leu Ser Ala Thr Asp Leu Asp Ala Val Arg Glu Leu Leu  
195 200 205  
Glu Ser Leu Val Ser Arg Gln Gln Arg Phe Phe Val Asp Leu Leu Asp  
210 215 220  
Ser Met Glu Arg Lys Glu Glu Ile Arg Glu Arg Ile Arg Gln Glu Lys  
225 230 235 240  
Glu

<210> 1040  
<211> 182  
<212> PRT  
<213> Pinus radiata

<400> 1040  
Met Val Tyr Ile Val Leu Leu Asp Leu Cys Glu Ser Val Gln Pro Pro  
1 5 10 15  
Gln Gly Ser Leu Gln Glu Phe Ser Asn Ser Ile Gln Glu Glu Gln Ala  
20 25 30  
Met Val Asp Leu Met Pro Lys Asp Ser Arg Gln Thr Met Ile Asn Asn  
35 40 45  
Thr Thr Ile Phe Val Gly Arg Leu Asp Pro Asn Ala Thr Asp Glu Asp  
50 55 60  
Leu Arg Gln Val Phe Gly Gln Tyr Gly Asp Leu Val Ser Ile Lys Ile  
65 70 75 80  
Pro Val Gly Lys Gly Cys Gly Phe Val Gln Phe Ala Asn Arg Ala Cys  
85 90 95  
Ala Glu Glu Ala Leu Gln Arg Leu His Gly Thr Val Ile Arg Gln Gln

[illegible]

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<210> 1041
<211> 66
<212> PRT
<213> Pinus radiata
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[illegible]

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<210> 1042
<211> 152
<212> PRT
<213> Pinus radiata
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	<400> 1042															
Val 1	Gly	Gly	Gly	Gly	Gly	Gly	Lys	Gly	Ser	Pro	Tyr	Arg	Gly	Val	Arg	
Met	Arg	Lys	Trp	Gly	Lys	Trp	Val	Ser	Glu	Val	Arg	Glu	Pro	Asn	Lys	
Arg	Ser	Arg	Ile	Trp	Leu	Gly	Ser	Tyr	Ser	Thr	Pro	Glu	Ala	Ala	Ala	
Arg	Ala	Tyr	Asp	Thr	Ala	Val	Phe	Tyr	Leu	Arg	Gly	Pro	Ser	Ala	Thr	
Leu	Asn	Phe	Pro	Glu	Glu	Ala	Arg	Lys	Glu	Gln	Gln	Ser	Asp	Leu	Arg	
Leu	Ser	Gln	Leu	Gly	Glu	Leu	Ser	Pro	Ser	Ser	Ile	Gln	Arg	Arg	Ala	
Ala	Glu	Val	Gly	Ala	Ala	Val	Asp	His	Ala	Met	Gln	Ala	Gly	Pro	Val	
Pro	Ala	Gln	Thr	Leu	Arg	Glu	Ile	Asn	Gln	Glu	Asn	Asp	Met	Lys	Asn	
Ala	Leu	Ser	Ser	Lys	Leu	Ser	Glu	Gly	Asn	Asn	Phe	Lys	Ile	Glu	Ala	
Lys	Asn	Asn	Met	Arg	Gln	Gln	Gly									

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<210> 1043
<211> 193
<212> PRT
<213> Pinus radiata
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<400> 1043  
 Met Ala Phe Ala Gly Thr Thr Gln Lys Cys Lys Ala Cys Glu Lys Thr  
 1 5 10 15  
 Val Tyr Leu Val Asp Gln Leu Thr Ala Asp Asn Ser Val Phe His Lys  
 20 25 30  
 Ser Cys Phe Arg Cys His His Cys Asn Gly Thr Leu Lys Leu Ser Asn  
 35 40 45  
 Tyr Ser Ser Phe Glu Gly Val Leu Tyr Cys Lys Pro His Phe Asp Gln  
 50 55 60  
 Leu Phe Lys Arg Thr Gly Ser Leu Asp Lys Ser Phe Glu Ala Ile Pro  
 65 70 75 80  
 Arg Ala Ser Arg Asn Asp Lys Met His Glu Asn Glu Asn Arg Thr Pro  
 85 90 95  
 Ser Arg Val Ser Ala Leu Phe Ser Gly Thr Gln Asp Lys Cys Val Ala  
 100 105 110  
 Cys Gly Lys Thr Val Tyr Pro Ile Glu Lys Val Ala Val Asp Gly Thr  
 115 120 125  
 Ser Tyr His Arg Pro Cys Phe Lys Cys Cys His Gly Gly Cys Val Ile  
 130 135 140  
 Ser Pro Ser Asn Tyr Val Ala His Glu Gly Arg Leu Tyr Cys Arg His  
 145 150 155 160  
 His Ser Ser Gln Leu Phe Arg Glu Lys Gly Asn Phe Ser Gln Leu Ser  
 165 170 175  
 Lys Ala Thr Pro Thr Lys Gly Val Thr Glu Asn Ser Asp Thr Asp Asp  
 180 185 190  
 Lys

<210> 1044  
 <211> 121  
 <212> PRT  
 <213> Pinus radiata

<400> 1044  
 Met Val Lys Pro Leu Pro Lys Gln Ser Ser Pro Ser Gly Ser Glu Asn  
 1 5 10 15  
 Cys Gln Ile Lys Ser Arg Gln Phe Lys Gly Ile Arg Leu Arg Lys Trp  
 20 25 30  
 Gly Lys Trp Val Ser Glu Ile Arg Met Pro Asn Ser Arg Ala Lys Ile  
 35 40 45  
 Trp Leu Gly Ser Tyr Asp Ser Pro Glu Lys Ala Ala Arg Ala Tyr Asp  
 50 55 60  
 Phe Ala Leu Tyr Cys Leu Arg Gly Ser Lys Ala Thr Phe Asn Phe Pro  
 65 70 75 80  
 Asp Ser Pro Pro Glu Ile Pro Cys Ala Ser Asp Leu Ser Pro Pro Gln  
 85 90 95  
 Ile Gln Ala Ala Ala Ala Arg Phe Ala Thr Glu Asp Phe Arg Leu Pro  
 100 105 110  
 Ser Glu Glu Asp Ala Ala Ser Ser Ser  
 115 120

<210> 1045  
 <211> 131  
 <212> PRT  
 <213> Pinus radiata

<400> 1045  
 Met Glu Ile Arg Leu Gln Gln Glu Asn Asp Gln Asp Ile Ala Pro Pro  
 1 5 10 15  
 His Glu Asp Arg Val Ser Arg Gln Phe Lys Gly Val Arg Pro Arg Lys  
 20 25 30

Trp Gly Ile Trp Val Ser Glu Ile Arg Met Pro Arg Ser Arg Gln Lys  
                   35                  40                  45  
 Ile Trp Leu Gly Ser Tyr Lys Lys Pro Glu Gln Ala Ala Arg Ala Tyr  
           50                  55                  60  
 Asp Ala Ala Val Tyr Cys Leu Arg Gly Ser Asn Ala Lys Phe Asn Phe  
   65                  70                  75                  80  
 Pro Asn Ser Val Pro Asp Ile Pro Ser Ala Ser Ser Leu Ser Arg Gln  
                   85                  90                  95  
 Gln Ile Gln Leu Ala Ala Ala Lys Tyr Ala Leu Asp Gln Ser Pro Ser  
                   100                  105                  110  
 Ser Pro Pro Ser Leu Asn Asn Asn Lys Glu Glu Pro Ala Ser Pro Ser  
           115                  120                  125  
 Gln Ser Ser  
       130

<210> 1046  
 <211> 102  
 <212> PRT  
 <213> Pinus radiata

<400> 1046  
 Met Thr Gln Gln Thr Thr Ser Pro Thr Val Ser Pro Ala Ala Leu Ala  
   1                  5                  10                  15  
 Leu Pro Thr Ser Ala Ser Ser Thr Ser Ala Lys Ser Ala Ala Val Pro  
           20                  25                  30  
 Val Pro Ala Gln Ala Asn Pro Arg Lys Arg Pro Arg Ser Asp Leu Ser  
           35                  40                  45  
 Ala Glu Glu Lys Arg Glu Ala Arg Ala His Arg Asn Arg Ile Ala Ala  
   50                  55                  60  
 Gln Asn Ser Arg Asp Lys Arg Lys Gln Gln Phe Thr Ser Leu Glu Gln  
   65                  70                  75                  80  
 Arg Val Ile Asp Leu Glu Asn Glu Asn Arg Gln Leu Arg Asp Ala Leu  
                   85                  90                  95  
 Ala Thr Ser Gln Pro Asn  
           100

<210> 1047  
 <211> 66  
 <212> PRT  
 <213> Pinus radiata

<400> 1047  
 Leu Leu Thr Ile Phe Glu Ala Val Tyr Val His Lys Gly Ile Val Asn  
   1                  5                  10                  15  
 Ala Ala Lys Val Leu Asn Leu Thr Pro Ser Ala Ile Ser Gln Ser Ile  
           20                  25                  30  
 Gln Lys Leu Arg Val Ile Phe Pro Asp Pro Leu Phe Ile Arg Lys Gly  
           35                  40                  45  
 Gln Gly Val Thr Pro Thr Ala Phe Ala Met His Leu His Glu Tyr Ile  
   50                  55                  60  
 Ser Gln  
   65

<210> 1048  
 <211> 106  
 <212> PRT  
 <213> Pinus radiata

<400> 1048  
 Met Lys Gly Pro Gln Gly Ile Ser Asn Ala Gln Asn Thr Cys Thr Lys  
   1                  5                  10                  15

Phe Arg Met Pro Thr Ser Glu Asn Leu Ile Pro Ile Arg Leu Asp Ile  
                   20                  25                  30  
 Glu Ile Asp Gly Leu Arg Leu Lys Asp Ala Phe Thr Trp Asn Val Asn  
                   35                  40                  45  
 Asp Pro Asp Ser Glu Ile His Leu Phe Ala Arg Arg Thr Ile Lys Asp  
                   50                  55                  60  
 Leu Lys Tyr Pro Gly Ser Phe Ile Thr Pro Val Val Gln Ser Ile Gln  
 65                  70                  75                  80  
 Ala Gln Leu Ala Glu Phe Arg Ser Phe Glu Gly Gln Glu Met Asn Thr  
                   85                  90                  95  
 Gly Gln Lys Val Leu Pro Leu Lys Leu Pro  
                   100                  105

&lt;210&gt; 1049

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1049

Met Glu Gly Ser Gln Asn Gly Ser Ser Asn Ala Pro Pro Pro Phe Leu  
 1                  5                  10                  15  
 Thr Lys Thr Tyr Asp Met Val Asp Asp Pro Ala Thr Asn Ala Met Val  
                   20                  25                  30  
 Ser Trp Ser Pro Gly Ser Asn Ser Phe Ile Val Trp Asn Pro Thr Glu  
                   35                  40                  45  
 Phe Ser Arg Val Leu Leu Pro Thr Tyr Phe Lys His Ser Asn Phe Ser  
                   50                  55                  60  
 Ser Phe Val Arg Gln Leu Asn Thr Tyr Gly Phe His Lys Ile Asp Pro  
 65                  70                  75                  80  
 Glu Arg Trp Glu Phe Ala Asn Glu Gly Phe Leu Arg Gly His Arg His  
                   85                  90                  95  
 Leu Leu Lys Asn Ile His Arg Arg Lys Pro Val His Ser His Ser Gln  
                   100                  105                  110  
 Gln Lys Gly Glu Ser Leu Ser Gly Gly Ser Cys Val Glu Ile Lys Gln  
                   115                  120                  125  
 Leu Glu Asp Glu Thr Glu  
 130

&lt;210&gt; 1050

&lt;211&gt; 220

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1050

Met Val Leu Tyr Glu Leu Leu His Val Gln Gln Ile Gln Gln Ile Gln  
 1                  5                  10                  15  
 Gln Gln Gln Phe Gln Leu Gln Gln Gln Gln Ile Ala Ala Ala Ala Ser  
                   20                  25                  30  
 Ile His His Met Gly Arg Asn Pro Leu Gly Pro Arg Asp Gln Pro Met  
                   35                  40                  45  
 Lys Leu His Gly Ser Ser Leu Ser Lys Pro Ala Lys Leu Tyr Arg Gly  
                   50                  55                  60  
 Val Arg Gln Arg His Trp Gly Lys Trp Val Ala Glu Ile Arg Leu Pro  
 65                  70                  75                  80  
 Arg Asn Arg Thr Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala Glu Glu  
                   85                  90                  95  
 Ala Ala Met Ala Tyr Asp Lys Ala Ala Tyr Arg Leu Arg Gly Asp Tyr  
                   100                  105                  110  
 Ala Arg Leu Asn Phe Pro His Leu Lys His His Leu Glu Ala Asn Ser  
                   115                  120                  125  
 Phe Ala Pro Trp Thr Gly Asn Ser Val Leu Pro Ser Ser Val Asp Ala



130		135		140											
Lys	Leu	Gln	Ala	Ile	Cys	Gln	Ser	Leu	Lys	Gln	Pro	Leu	Glu	Ser	Met
145		150		155		160				155					
Ser	Lys	Thr	Glu	Glu	Ser	Glu	Glu	Ile	Ser	Cys	Ala	Tyr	Glu	Asn	Ser
		165		170		175									
Gly	Ser	Leu	Gly	Ser	Val	Arg	Asp	Glu	Asp	Ala	Lys	Lys	Asn	Asp	Val
		180		185		190									
Val	Ser	Val	Lys	Ser	Glu	Thr	Cys	Asp	Ser	Asp	Ser	Ser	Asp	Asp	Ser
		195		200		205									
Thr	Ile	Thr	Ala	Leu	Asn	Ser	Ser	Gly	Asp	Gln	Asn				
210						215					220				

&lt;210&gt; 1051

&lt;211&gt; 219

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1051

Arg	Ile	Glu	Ala	Pro	Gly	Arg	Arg	Thr	Asn	Pro	Ala	Ala	Val	Thr	Trp
1			5					10					15		
Ala	Ala	Ala	His	Phe	Ser	Val	Lys	Glu	Gln	Asp	Arg	Phe	Leu	Pro	Ile
		20					25						30		
Ala	Asn	Val	Gly	Arg	Ile	Met	Lys	Lys	Ala	Leu	Pro	Ala	Asn	Gly	Lys
		35				40						45			
Val	Ser	Lys	Asp	Ala	Lys	Glu	Thr	Val	Gln	Glu	Cys	Val	Ser	Glu	Phe
		50			55					60					
Ile	Ser	Phe	Ile	Thr	Gly	Glu	Ala	Ser	Asp	Lys	Cys	Gln	Arg	Glu	Lys
65				70					75					80	
Arg	Lys	Thr	Ile	Asn	Gly	Asp	Asp	Leu	Leu	Trp	Ala	Met	Thr	Thr	Leu
			85					90						95	
Gly	Phe	Glu	Asp	Tyr	Val	Glu	Pro	Leu	Lys	Ile	Tyr	Leu	His	Lys	Tyr
		100						105					110		
Arg	Glu	Met	Glu	Gly	Glu	Lys	Val	Ser	Met	Ala	Lys	Gln	Gly	Asp	Pro
		115				120						125			
Thr	Pro	Ser	Lys	Glu	Gly	Asn	Asn	Ala	Ile	Asn	Gly	Ser	Ser	Ile	Glu
		130				135									
Asn	Pro	Asn	Ala	Asn	Ala	Tyr	Ser	Gly	Leu	Asn	Pro	Gly	Gly	Tyr	Asn
145				150						155					160
Arg	Val	Gln	Ser	Gln	Ser	Leu	Pro	His	Met	Gln	Gln	Ala	Ala	Tyr	Gly
			165						170						175
Gln	Pro	Pro	Gly	Gly	Met	Val	Tyr	Gly	His	His	Gly	His	Ile	Met	Gly
			180					185					190		
Ala	Tyr	Asn	Met	Thr	Ala	Pro	Asn	Ser	Ser	Gly	Gly	Asn	Ser	Ser	Gly
		195				200						205			
Gln	Gln	Gln	Gln	Gln	Ala	Pro	Arg	Gly	Gln	Trp					
210						215									

&lt;210&gt; 1052

&lt;211&gt; 100

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1052

Gly	Cys	Thr	Thr	Val	Val	Glu	Thr	Leu	Ala	Lys	Trp	Gln	Glu	Leu	Asn
1			5					10					15		
Ser	Gln	Val	Glu	Ser	Ser	Lys	Asp	Gly	Ala	Lys	Arg	Leu	Arg	Lys	Ala
		20						25					30		
Pro	Ala	Lys	Gly	Ser	Lys	Lys	Gly	Cys	Met	Lys	Gly	Lys	Gly	Gly	Pro
		35				40						45			
Asp	Asn	Gly	Arg	Cys	Asn	Tyr	Arg	Gly	Val	Arg	Gln	Arg	Thr	Trp	Gly
		50				55						60			

Lys Trp Val Ala Glu Ile Arg Glu Pro Asn Arg Gly Ser Arg Leu Trp  
 65 70 75 80  
 Leu Gly Thr Phe Ser Ala Glu Glu Ala Ala Arg Ala Tyr Asp Gln  
 85 90 95  
 Ala Ala Arg Val  
 100

<210> 1053  
 <211> 117  
 <212> PRT  
 <213> Pinus radiata

<400> 1053  
 Met Glu Ile Val Gly Lys Ala Lys Glu Asp Val Ser Leu Pro Lys Ala  
 1 5 10 15  
 Thr Met Thr Lys Ile Ile Lys Glu Met Leu Pro Ala His Val Arg Val  
 20 25 30  
 Thr Arg Asp Ala Gln Asp Leu Leu Val Glu Cys Cys Val Glu Phe Ile  
 35 40 45  
 Asn Leu Ile Ser Ser Glu Ser Asn Asp Ile Cys Tyr Lys Glu Glu Lys  
 50 55 60  
 Arg Thr Ile Ala Pro Glu His Val Leu Glu Ser Leu Lys Ile Leu Gly  
 65 70 75 80  
 Phe Gly Ser Tyr Ile Arg Glu Val Lys Ala Ala Tyr Glu Gln His Arg  
 85 90 95  
 Ile Glu Asn Trp Asp Cys Pro Arg Ala Gly Thr Arg Trp Ser Lys Asn  
 100 105 110  
 Arg Leu Glu Met Thr  
 115

<210> 1054  
 <211> 161  
 <212> PRT  
 <213> Pinus radiata

<400> 1054  
 Asn Ile Asn Gly Val Ala Gly Gly Val Ala Lys Glu Lys Lys Val Asn  
 1 5 10 15  
 Phe Pro Trp Cys Ala Leu Glu Lys Gln Val Gly Thr Ser Ser Phe Asp  
 20 25 30  
 Pro Asn Leu Ala Ser Ser Lys Gln Ala Met Asp Ser Leu Ile Met Gln  
 35 40 45  
 Gln Leu Pro Thr Phe Leu Gln Tyr Cys Lys Asp Leu Glu Glu Gly Arg  
 50 55 60  
 Gln Ser Trp Phe Met His Lys Lys Glu Ala Thr Trp Arg Leu Ser Arg  
 65 70 75 80  
 Leu Glu Gln Gln Leu Glu Ser Glu Lys Ala Arg Lys Arg Arg Glu Lys  
 85 90 95  
 Ile Glu Glu Val Gly Ser Lys Ile Arg Ala Leu Arg Glu Glu Glu Ile  
 100 105 110  
 Thr Tyr Leu Asp Lys Leu Glu Thr Glu Cys Arg Glu Gln Leu Ser Ser  
 115 120 125  
 Leu Gln Arg Asp Ala Glu Met Lys Glu Ala Lys Met Met Glu Leu Trp  
 130 135 140  
 Ala Thr Lys His Leu Gln Leu Thr Lys Phe Val Asp Ser Ala Leu Ser  
 145 150 155 160  
 Val

<210> 1055  
 <211> 396

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1055

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Met Ala Arg Glu Thr Asn Ser Phe Ala Leu Leu Gly Gly Asp Asp Asp
 1          5          10          15
Gln Gly Asp Asp Asp Leu Met Ala Leu Ile Asn Ser Ala Ala Thr Leu
 20          25          30
Lys Pro Glu Lys Lys Pro Lys Thr Thr Ala Lys Lys Asn Gly Gln Gln
 35          40          45
Gln Pro Pro Pro Pro Gln Ser Gln Pro Ala Lys Leu Pro Ser Lys Pro
 50          55          60
Leu Pro Pro Ala Glu Ala Val Arg Ala Asp Arg Gly Arg Gly Arg Gly
 65          70          75          80
Gly Arg Gly Arg Gly Gly Gly Arg Gly Ser Arg Phe Glu Gly Gly Glu
 85          90          95
Tyr Asn Thr Glu Ser Asn Gly Tyr Gly Gly Gly Gly Gly Phe Gly Gly
100          105          110
Gly Arg Gly Trp Gly Arg Asp Glu Asp Ser Gly Asn Arg Gly Trp Gly
115          120          125
Arg Glu Glu Asp Thr Gly Gly Arg Gly Trp Gly Arg Ser Asn Gly Glu
130          135          140
Glu Asp Thr Gly Gly Arg Gly Trp Ser Arg Ser Asn Gly Glu Asp Asp
145          150          155          160
Ala Ala Ala Gly Gly Gly Gln Ser Arg Gly Arg Gly Arg Gly Arg Gly
165          170          175
Arg Gly Arg Gly Phe Gly Gly Arg Gly Ser Gly Arg Phe Gly Gly Gly
180          185          190
Gly Asp Ser Tyr Gly Tyr Asp Ala Asn Gly Gln Asp Arg Pro Pro Arg
195          200          205
Gln Gln Phe Glu Asp Thr Asn Thr Phe Thr Gly Thr Asp Asn Trp Asp
210          215          220
Thr Pro Glu Val Ser Val Val Asp Glu Ala Lys Asn Val Glu Pro Glu
225          230          235          240
Gln Lys Lys Pro Glu Glu Glu Ala Thr Pro Gly Val Thr Ser Glu Asn
245          250          255
Lys Asp Asn Lys Glu Glu Glu Asp Asn Glu Met Thr Leu Asp Glu Tyr
260          265          270
Glu Lys Leu Leu Asn Glu Lys Arg Lys Thr Leu Glu Ala Leu Lys Asn
275          280          285
Ala Glu Arg Lys Val Ile Leu Asp Arg Asp Phe Glu Lys Met Gln Leu
290          295          300
Val Asp Lys Lys Asn Asp Gly Ile Phe Ile Lys Leu Asn Ser Glu Lys
305          310          315          320
Glu Arg Gln Arg Lys Lys Glu Thr Leu Glu Lys Glu Glu Arg Ala Arg
325          330          335
Lys Ser Val Ser Ile Asn Glu Phe Leu Lys Pro Ala Asp Gly Glu Arg
340          345          350
Tyr Phe Thr Pro Ser Gly Thr Arg Gly Arg Gly Arg Gly Arg Gly Arg
355          360          365
Gly Arg Gly Asp Gly Val Ser Thr Arg Gly Gly Phe Gly Gly Arg Tyr
370          375          380
Ser Asp Ala Asp Gln Val Ala Ala Pro Cys Ile Glu
385          390          395

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&lt;210&gt; 1056

&lt;211&gt; 120

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1056

Thr Trp Ala Gln Glu Glu Lys Ser Pro Arg Ala Ile Gly Gly Glu  
 1 5 10 15  
 Lys Gly Gly Arg Gly Leu Arg Gln Phe Ser Met Lys Val Cys Gln Lys  
 20 25 30  
 Val Glu Ser Lys Gly Arg Thr Thr Tyr Asn Glu Val Ala Asp Glu Leu  
 35 40 45  
 Val Ala Glu Tyr Ala Asn Pro Asn Ser Ala Leu Ile Ser Pro Asp Gln  
 50 55 60  
 Gln Gln Tyr Asp Glu Lys Asn Ile Arg Arg Arg Val Tyr Asp Ala Leu  
 65 70 75 80  
 Asn Val Leu Met Ala Met Asp Ile Ile Ser Lys Asp Lys Lys Glu Ile  
 85 90 95  
 Gln Trp Lys Gly Leu Pro Ser Thr Ser Pro Asn Asp Leu Glu Asp Leu  
 100 105 110  
 Lys Ala Lys Arg Met Gly Leu Arg  
 115 120

&lt;210&gt; 1057

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1057

Pro Met Lys Leu Tyr Arg Gly Val Arg Gln Arg His Trp Gly Lys Trp  
 1 5 10 15  
 Val Ala Glu Ile Arg Leu Pro Arg Asn Arg Thr Arg Leu Trp Leu Gly  
 20 25 30  
 Thr Phe Asp Thr Ala Glu Asp Ala Ala Leu Ala Tyr Asp His Glu Ala  
 35 40 45  
 Tyr Lys Leu Arg Gly Glu Asn Ala Arg Leu Asn Phe Pro His Leu Phe  
 50 55 60  
 Leu Asn Lys Gly Ser Thr Ser Pro Lys Ala Cys Ser Val Ala  
 65 70 75

&lt;210&gt; 1058

&lt;211&gt; 171

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1058

Ser Phe Ser Cys Arg Ile Arg His Gln Thr Glu Pro Thr Leu Ile Leu  
 1 5 10 15  
 Ile Asp Thr Ala Gly Cys Asp Met Glu Glu Lys Lys Asp Asp Glu Asp  
 20 25 30  
 Ser Thr Met Asn Glu Gly Glu Ala Thr Val Thr Leu Met His Ala Lys  
 35 40 45  
 Lys Leu Leu Glu Ser Gly Val Asn Pro Ser Asp Ile Gly Ile Ile Thr  
 50 55 60  
 Pro Tyr Ala Ala Gln Val Gly Leu Leu Lys Ile Met Arg Ser Lys Glu  
 65 70 75 80  
 Met Lys Leu Lys Asp Leu Glu Ile Ser Thr Val Asp Gly Phe Gln Gly  
 85 90 95  
 Arg Glu Lys Glu Ala Ile Val Ile Ser Met Val Arg Ser Asn Ala Lys  
 100 105 110  
 His Glu Val Gly Phe Leu Asn Asp Arg Arg Arg Met Asn Val Ala Val  
 115 120 125  
 Thr Arg Ala Arg Arg Gln Cys Cys Ile Ile Cys Asp Thr Glu Thr Val  
 130 135 140  
 Ser Ser Asp Lys Phe Leu Lys Arg Leu Val Glu Tyr Phe Glu Glu His  
 145 150 155 160  
 Ala Glu Tyr Leu Ser Ala Ser Glu Tyr Leu Thr

165

170

<210> 1059  
 <211> 94  
 <212> PRT  
 <213> Pinus radiata

&lt;400&gt; 1059

Glu	Lys	Cys	Ser	Asp	Gln	Val	Ser	Gly	Ser	Thr	Ser	Ser	Cys	Arg	Ile
1				5					10					15	
Arg	His	Glu	Leu	Gly	Tyr	Ser	Arg	Ser	Ala	Lys	Arg	Cys	Lys	Glu	Lys
			20					25					30		
Trp	Glu	Asn	Ile	Asn	Lys	Tyr	Phe	Arg	Lys	Ala	Lys	Glu	Ser	Asn	Lys
		35					40					45			
Lys	Arg	Pro	Glu	Asn	Ala	Lys	Thr	Cys	Pro	Tyr	Phe	His	Gln	Leu	Asp
		50				55					60				
Ala	Leu	Tyr	Lys	Lys	Arg	Asn	Leu	Gly	Asn	Arg	His	Asn	Lys	Ile	Met
65					70					75					80
Val	Leu	Ser	Ile	Phe	Ser	Val	Ala	Ser	Thr	Gly	Leu	Phe	Met		
				85						90					

<210> 1060  
 <211> 174  
 <212> PRT  
 <213> Pinus radiata

&lt;400&gt; 1060

Met	Ala	Pro	Ser	Asn	Asn	Arg	Arg	Asp	Asp	Asn	Gly	Ala	Arg	Gly	Val
1				5					10					15	
His	Phe	Arg	Gly	Val	Arg	Lys	Arg	Pro	Trp	Gly	Arg	Tyr	Ala	Ala	Glu
			20					25					30		
Ile	Arg	Asp	Pro	Trp	Lys	Lys	Val	Arg	Leu	Trp	Leu	Gly	Thr	Phe	Asp
		35					40					45			
Thr	Ala	Glu	Glu	Ala	Ala	Arg	Ala	Tyr	Asp	Thr	Ala	Ala	Ile	Ser	Leu
		50				55					60				
Arg	Gly	Pro	Lys	Ala	Lys	Thr	Asn	Phe	Ala	Tyr	Ser	Ser	Pro	Ser	Ser
65					70					75					80
Ser	Ser	Ser	Leu	His	Asn	Asn	Gln	Ser	Ser	Ser	Gln	Asn	Ser	Ser	Thr
			85						90				95		
Val	Glu	Ser	Trp	Pro	Ser	Ala	Ala	Pro	Val	Thr	Arg	Ser	Gly	Asp	Leu
			100					105					110		
Glu	Leu	Pro	Ala	Ser	Phe	Leu	Pro	Arg	Leu	Gly	Val	Ser	Thr	Gly	Arg
		115					120					125			
Arg	Val	Leu	Asn	Gly	Gly	Asn	Pro	Arg	Ser	Gly	Arg	Arg	Arg	Ser	Leu
		130				135					140				
Ser	Glu	Lys	Asn	Ser	Gly	Arg	Lys	Ala	Glu	Gly	Ala	Glu	Ala	Arg	Thr
145					150					155					160
Thr	Leu	Ser	Asp	Ser	Asp	Ser	Ser	Ser	Ser	Ala	Val	Leu	Asp		
				165					170						

<210> 1061  
 <211> 121  
 <212> PRT  
 <213> Pinus radiata

&lt;400&gt; 1061

Met	Gly	Pro	Leu	Met	Gly	Ser	Pro	Leu	Gly	Gly	Gly	Leu	Gly	Leu	Ser
1				5					10					15	
Pro	Arg	Met	Gly	Gly	Gly	Ile	Gly	Asn	Gly	Leu	Gln	Gly	Gly	Leu	Gly
			20					25				30			
Val	Gly	Leu	Ala	Gly	Leu	Gly	Ala	Thr	Ala	Leu	Thr	Ile	Gly	Ala	Ala

35	40	45
Ser Pro Ala Asn Gln Leu	Ser Ser Asp Gly Met Gly	Asn Ser His Gly
50	55	60
Asp Asn Ser Thr Val Ser	Pro Ile Pro Tyr Gly Leu	Asp Val Ser Val
65	70	75
Arg Gly Arg Lys Arg Gly	Gly Pro Val Glu Lys Val	Val Glu Arg Arg
85	90	95
Gln Arg Arg Met Ile Lys	Asn Arg Glu Ser Ala Ala	Arg Ser Arg Ala
100	105	110
Arg Lys Gln Ala Tyr Thr	Val Asn Trp	
115	120	

&lt;210&gt; 1062

&lt;211&gt; 145

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1062

Glu Thr Arg Gly Gly Ser	Ser Gly Asp Phe Leu Pro	Pro Pro Pro Thr
1	5	10
Thr Lys Cys Ser Glu Glu	Leu Gln Asn Lys Ile Thr	Lys Tyr Ile Ala
20	25	30
Leu Lys Ser Ala Gly Arg	Ser Phe Asn Lys Glu Leu	Arg Asn Ser Lys
35	40	45
Gly Tyr Arg Asn Pro Asp	Phe Leu Gln Arg Ala Val	Lys Tyr Gln Gly
50	55	60
Ile Asp Gln Ile Gly Ser	Cys Phe Lys Lys Glu Ile Phe	Asp Pro His
65	70	75
Gly Tyr Asp Pro Ser Asp	Tyr Tyr Asp Ala Leu Ala	Leu Glu Leu Lys
85	90	95
Arg Glu Phe Glu Arg Arg	Glu Gln Glu Lys Gln Lys	Asn Gln Arg Val
100	105	110
Asp Phe Val His Gly Ala	Val Gln Thr Thr Ser Val	Gln Ser Val Ser
115	120	125
Lys Pro Ile Val Gln Val	Met Gly Gly Gln Lys Val	Pro Val Val Gly
130	135	140
Val		
145		

&lt;210&gt; 1063

&lt;211&gt; 236

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1063

Met Ser Ser Pro Gln Ser	Asn Lys Trp Leu Ser Tyr	Phe Asp Glu Pro
1	5	10
Leu Leu Asp Asp Val Gly	Val Gly Gln Pro Ala	Asn Pro Phe Phe Trp
20	25	30
Cys Gly Gln Gly Ile Asn	Asp Gln Pro Asp Val Ser	Val Glu Ile Asp
35	40	45
Gly Pro Asn Lys Asp Met	Asp Glu Gln Asp Lys Leu	Cys Pro Arg Lys
50	55	60
Arg Ser Arg Glu Glu Ser	Ser Gly Gly Pro Gly Ser	Lys Ala Cys Arg
65	70	75
Glu Lys Met Arg Arg Asp	Arg Leu Asn Asp Arg Phe	Met Glu Leu Ser
85	90	95
Ser Val Leu Glu Pro Gly	Arg Pro Pro Lys Thr Ala	Asp Lys Ala Thr
100	105	110
Ile Leu Ser Asp Ala Ala	Arg Val Met Thr Gln Leu	Arg Thr Glu Ala
115	120	125

Gln Asn Leu Lys Ala Glu Asn Glu Arg Leu Gln Glu Ala Ile Lys Asp  
 130 135 140  
 Leu Lys Ala Glu Lys Asn Glu Leu Arg Asp Glu Lys Leu Arg Met Lys  
 145 150 155 160  
 Ala Glu Lys Glu Lys Leu Asp Gln Gln Val Lys Ala Met Ala Leu Pro  
 165 170 175  
 Thr Gly Phe Val Pro His Pro Ala Ala Phe His Ala Ala Ala Phe  
 180 185 190  
 Ala Ala Gln Ser Gln Ala Ala Ala Asn Lys Thr Met Pro Val Pro Gly  
 195 200 205  
 Tyr Pro Gly Met Ala Met Trp Gln Trp Met Pro Pro Ala Val Val Asp  
 210 215 220  
 Thr Ser Gln Asp His Val Leu Arg Pro Pro Val Ala  
 225 230 235

<210> 1064  
 <211> 145  
 <212> PRT  
 <213> Pinus radiata

<400> 1064  
 Met Gly Ser Arg Thr Met Leu Ser Ser Asn Gly Gly Arg Thr Pro Gln  
 1 5 10 15  
 Phe Gln Pro Leu Val Arg Gln Asn Ser Leu Tyr Asn Leu Thr Leu Glu  
 20 25 30  
 Glu Val Gln Asn Gln Leu Gly Asp Ala Ser Lys Pro Leu Ser Ser Met  
 35 40 45  
 Asn Met Asp Glu Leu Leu Lys Asn Ile Trp Thr Gln Glu Glu Ser Gln  
 50 55 60  
 Ala Ile Ser Met Ala Ile Gly Asn Gly Pro Met Asn Gly Val Pro Pro  
 65 70 75 80  
 Asn Ser Ala Pro Ala Ser Gly Gly Leu Gln Arg Gln Gly Ser Leu Thr  
 85 90 95  
 Ile Pro Arg Thr Leu Ser Arg Lys Thr Val Asp Glu Val Trp Arg Asp  
 100 105 110  
 Ile Gln Gln Ser Gln Gly Lys Ser Asn Glu Glu Lys Lys Pro Gln Gln  
 115 120 125  
 Arg Gln Ser Thr Phe Gly Glu Met Thr Leu Glu Asp Phe Leu Val Lys  
 130 135 140  
 Ala  
 145

<210> 1065  
 <211> 171  
 <212> PRT  
 <213> Pinus radiata

<400> 1065  
 Met Ala Ser Gly Asn Val Asp Pro Asp Gln Trp Glu Phe Ala Asn Glu  
 1 5 10 15  
 Asp Phe Leu Arg Gly Gln Arg Asn Leu Leu Lys Asn Ile His Arg Arg  
 20 25 30  
 Lys Pro Met His Ser His Ser Gln Asn Pro Gln Gln Gly Val Cys Asn  
 35 40 45  
 Asp Ala Ile Lys Tyr Glu Leu Glu Glu Glu Ile Gln Arg Leu Lys Arg  
 50 55 60  
 Asp Lys Gly Leu Leu Met Met Glu Leu Val Arg Ile Arg Gln Gln His  
 65 70 75 80  
 Gln Gly Thr Glu Met His Met Gln Thr Leu Glu Glu Arg Leu Gln Ala  
 85 90 95  
 Met Glu His Arg Gln Gln Gln Met Met Ala Phe Leu Ala Lys Ala Val

```

      100              105              110
Gln Lys Pro Gly Phe Val Ala Gln Leu Val Gln Gln Ser Glu Asn Asn
      115              120              125
Lys Leu Leu Glu Ala Ala Asn Lys Lys Arg Arg Leu Pro Lys Gln Glu
      130              135              140
Asn Cys Ser Glu Ala Gly Glu Thr Glu Leu Thr Asp Ser Gln Ile Val
      145              150              155              160
Lys Tyr Gln Pro Ala Ser Gly Asp Glu Cys Ser
      165              170

```

<210> 1066  
 <211> 112  
 <212> PRT  
 <213> Pinus radiata

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      <400> 1066
Val Ala Ala Ala Ser Ala Ser Ala Ser Gly Thr Ala Val Ala Ala Ser
  1              5              10              15
Leu Pro Val Asn Gly Ala Ala Gly Val Arg Ser Ser Val Asp Ser Glu
      20              25              30
His Ser Asp Ile Glu Ala Ser Phe Lys Glu Ala Glu Cys Ser Gln Ala
      35              40              45
Ile Val Glu Arg Arg Pro Arg Lys Arg Gly Arg Lys Pro Ala Asn Gly
      50              55              60
Arg Glu Glu Pro Leu Asn His Val Glu Ala Glu Arg Gln Arg Arg Glu
      65              70              75              80
Lys Leu Asn Gln Arg Phe Tyr Ala Leu Arg Ala Val Val Pro Asn Val
      85              90              95
Ser Lys Met Asp Lys Ala Ser Leu Leu Gly Asp Ala Ile Ser Tyr Ile
      100              105              110

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<210> 1067  
 <211> 73  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 1067
Leu Tyr Ala Glu Ser Ser Thr Val Thr His Leu Gln Tyr Gln Gln
  1              5              10              15
Ser Ile Leu Glu Asn Asp Leu Arg Ser Lys Leu Lys Asp Asn Leu Gln
      20              25              30
Gln Pro Gln Asn Ser Gly Lys Lys Arg Arg Tyr Arg Gly Val Arg Gln
      35              40              45
Arg Pro Trp Gly Lys Trp Ala Ala Glu Ile Arg Asp Pro Lys Lys Ala
      50              55              60
Ala Arg Val Trp Leu Gly Thr Phe Asp
      65              70

```

<210> 1068  
 <211> 203  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 1068
Asn Met Ala Lys His Thr Val Cys Ala Ser Phe Leu Asn Glu Gly Asp
  1              5              10              15
Phe Ile Cys Pro Pro Tyr Glu Asp Gly Ile Gly Leu Glu Trp Leu Ser
      20              25              30
Asp Phe Val Glu Asp Ser Phe Ala Ala Thr Gly Ser Ser Asn Ser Gly
      35              40              45
Ser Leu Ala Asp Leu Ser Lys Asp Lys Ile Asp Asp Asn Arg Glu Lys

```



50	55	60
Lys Lys Gln Asn Pro Thr Asp Glu Ala Ile Ile Pro Glu Ile Pro Pro		
65	70	75
Ile Lys Glu Thr Pro Arg Ser Gln Arg Ala Val Pro Gly Arg Ala Arg		80
	85	90
Ser Lys Arg Arg Arg Ser Ser Gly Ala Pro Ile Arg Gly Trp Ser Thr		95
	100	105
Ser Glu Asp Tyr Ala Leu Gln Asn Glu Gly Gly Met Lys Thr Val Thr		110
	115	120
Gly Ala Asp Ala Ile Asn His Tyr Gln Ser Ser Ala Pro Gln Gln Gln		125
	130	135
Pro Arg Arg Cys Thr His Cys Leu Ser Gln Arg Thr Pro Gln Trp Arg		140
145	150	155
Leu Gly Pro Leu Gly Pro Lys Thr Leu Cys Asn Ala Cys Gly Val Arg		160
	165	170
Phe Lys Ser Gly Arg Leu Phe Pro Glu Tyr Arg Pro Ala Lys Ser Pro		175
	180	185
Thr Phe Ile Arg Tyr Ile His Ser Asn Ser His		190
	195	200

&lt;210&gt; 1069

&lt;211&gt; 190

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1069

Gly Asn Ala Ala Arg Arg Pro His Asp Val Leu Leu Lys Leu Glu Lys	
1	5
Leu Ser Ser Gln Thr Thr Leu Glu Ser Leu Gln Arg Leu Ile Val Gln	
	20
Lys Lys Cys Leu Leu Phe Gly Lys Lys Val Gly Ile Arg Ile Asp Gly	
	35
Lys Lys Thr Ala Asn Thr Glu Lys Val Asn Glu Arg Asn Thr Ile Pro	
	50
Arg Ile Ile Phe Gly Ala Leu Thr Phe Thr Arg Asn Arg Pro His Ala	
65	70
Leu Ser Lys Asn Gly Ser Ile Ala Asp Thr Arg Arg Asn Ile Cys Gly	
	85
Ala Pro Gln Glu Asp Gly Thr Ile Cys Thr Ala Ile Pro Leu Lys Ser	
	100
Arg Lys Arg Cys Pro Asp His Lys Gly Gln Lys Gly Gln Lys Glu Lys	
	115
Asn Leu Ser Lys Ile Asn Ile Ser Ala Asn Val Glu Ser Arg Asn Gln	
	130
Gly Val Gly Glu His Glu Asn Glu Tyr Arg Tyr Cys Gly Val Leu Leu	
145	150
Lys Asp Gly Ser Thr Cys Lys Ile Ile Pro Asp Lys Gly Arg Lys Arg	
	165
Cys Asn Ile His Lys Gly Met Arg Ile Pro Gly Gln Ala Lys	
	180
	185
	190

&lt;210&gt; 1070

&lt;211&gt; 81

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1070

Met Ala Thr Ser Asn Pro Phe Asp Leu Leu Gly Asp Asp Asp Asn Gly	
1	5
Asp Val Ser Gln Leu Val Phe Val Pro Gln Glu Lys Pro Thr Val Lys	
	20
	25
	30

Lys Ala Ser Gln Pro Ala Gln Thr Ala Thr Ala Lys Leu Pro Ser Lys  
 35 40 45  
 Pro Leu Pro Pro Ala Gln Ala Val Arg Glu Ser Arg Asn Gly Val Gly  
 50 55 60  
 Arg Gly Gly Arg Gly Gly Arg Gly Gly Asp Arg Asn Gln Asp Val Gly  
 65 70 75 80  
 Tyr

<210> 1071  
 <211> 154  
 <212> PRT  
 <213> Pinus radiata

<400> 1071  
 Met Asn Arg Glu Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly  
 1 5 10 15  
 Gly Lys Gly Thr Met Arg Arg Lys Lys Lys Thr Ile His Arg Thr Thr  
 20 25 30  
 Thr Thr Asp Asp Lys Lys Leu Gln Ser Thr Leu Lys Arg Ile Gly Val  
 35 40 45  
 Asn Ala Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Leu Glu Asp Ser  
 50 55 60  
 Val Ile His Phe Gln Asn Pro Lys Val Gln Ala Ser Ile Ala Ala Asn  
 65 70 75 80  
 Thr Trp Val Val Ser Gly Ser Pro Gln Thr Lys Arg Leu Gln Asp Leu  
 85 90 95  
 Leu Pro Gly Ile Ile Asn Gln Leu Gly Pro Asp Ser Phe Ala Asn Leu  
 100 105 110  
 Arg Lys Leu Ala Gln Gln Phe Gln Lys Glu Val Pro His Pro Ala Val  
 115 120 125  
 Glu Glu Asp Asp Asp Asp Val Pro Glu Leu Val Glu Gly Glu Thr Phe  
 130 135 140  
 Glu Glu Ala Ala Lys Gln Glu Ser Ala Ala  
 145 150

<210> 1072  
 <211> 63  
 <212> PRT  
 <213> Pinus radiata

<400> 1072  
 Met Pro His Gln His Gln His Gln Glu Arg Phe Pro Ser Gln Glu Gly  
 1 5 10 15  
 Ile Ser Trp Lys Arg Asp Asp Glu Leu Pro Gln Pro Gln Asn Pro Pro  
 20 25 30  
 Lys Lys Lys Arg Tyr Arg Gly Val Arg Gln Arg Pro Trp Gly Lys Trp  
 35 40 45  
 Ala Ala Glu Ile Arg Asp Pro Lys Lys Ala Ala Arg Val Trp Leu  
 50 55 60

<210> 1073  
 <211> 331  
 <212> PRT  
 <213> Pinus radiata

<400> 1073  
 Met Gly Gln Ile Gly Gly Pro His Gly Tyr Pro Asn Ser Ser Pro Ser  
 1 5 10 15  
 Ala Gln Asp Ala Leu Tyr Glu Glu Leu Trp His Ala Cys Ala Gly Pro  
 20 25 30

Leu Val Thr Leu Pro Arg Ile Gly Glu Arg Val Phe Tyr Phe Pro Gln  
 35 40 45  
 Gly His Met Glu Gln Val Glu Ala Ser Thr Asn Gln Gly Ala Asp Gln  
 50 55 60  
 His Met Pro Leu Phe Asn Leu Pro Tyr Lys Ile Leu Cys Arg Val Ile  
 65 70 75 80  
 Asn Val Gln Leu Lys Ala Glu Pro Asp Thr Asp Glu Val Phe Ser Gln  
 85 90 95  
 Ile Thr Leu Leu Pro Glu Ala Glu Gln Asp Glu Ser Ser Val Glu Lys  
 100 105 110  
 Glu Pro Leu Thr Pro Leu Pro Pro Lys Pro Leu Val Tyr Ser Phe Cys  
 115 120 125  
 Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr His Gly Gly Phe Ser Val  
 130 135 140  
 Leu Arg Arg His Ala Asp Glu Cys Leu Pro Pro Leu Asp Met Ser Gln  
 145 150 155 160  
 Gln Pro Pro Ser Gln Asp Leu Val Ala Lys Asp Leu His Gly Val Glu  
 165 170 175  
 Trp Arg Phe Arg His Ile Phe Arg Gly Gln Pro Arg Arg His Leu Leu  
 180 185 190  
 Thr Thr Gly Trp Ser Val Phe Val Ser Ser Lys Arg Leu Val Ala Gly  
 195 200 205  
 Asp Ala Phe Ile Phe Leu Arg Gly Glu Asn Gly Glu Leu Arg Val Gly  
 210 215 220  
 Val Arg Arg Ala Met Arg Gln Gln Asn Asn Val Pro Ser Ser Val Ile  
 225 230 235 240  
 Ser Ser His Ser Met His Leu Gly Val Ile Ala Thr Ala Ser His Ala  
 245 250 255  
 Val Thr Thr Lys Thr Met Phe Ser Val Tyr Tyr Lys Pro Arg Thr Ser  
 260 265 270  
 Pro Ser Glu Phe Ile Ile Pro Tyr Asp Gln Tyr Met Glu Ser Met Lys  
 275 280 285  
 Ile Asn Phe Ser Val Gly Met Arg Phe Lys Met Lys Phe Glu Gly Glu  
 290 295 300  
 Glu Val Pro Glu Gln Arg Phe Thr Gly Thr Ile Val Gly Ile Ser Asp  
 305 310 315 320  
 Ala Asp Pro Val Asn Trp Pro Asn Ser Lys Trp  
 325 330

&lt;210&gt; 1074

&lt;211&gt; 113

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1074

Met Thr Gln Ala Thr Asn Tyr Thr Ala Gly Thr Ile Arg Asp Asp Gln  
 1 5 10 15  
 Glu Glu Gln Cys Val Arg Arg Gly Pro Trp Thr Val Asp Glu Asp Met  
 20 25 30  
 Ser Leu Ile Arg Cys Val Thr Thr Arg Gly Glu Gly Arg Trp Asn Thr  
 35 40 45  
 Val Ala Lys Phe Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu  
 50 55 60  
 Arg Trp Leu Asn Tyr Leu Arg Pro Asp Val Lys Arg Gly Asn Ile Thr  
 65 70 75 80  
 Pro Glu Glu Gln Leu Ile Leu Glu Leu His Arg Leu Trp Gly Asn  
 85 90 95  
 Arg Trp Ser Lys Ile Ala Arg Gln Leu Pro Gly Arg Thr Asp Asn Glu  
 100 105 110  
 Ile

<210> 1075  
 <211> 44  
 <212> PRT  
 <213> Pinus radiata

<400> 1075  
 Met Ala Glu Asn Tyr Gly Ser Pro Asp Ser Ser Pro Arg Ser Glu Asn  
 1 5 10 15  
 Glu Ser Gly Gly Gly His Met Gly Gly Ser Asp Phe Ser Val Lys Glu  
 20 25 30  
 Gln Asp Arg Phe Leu Pro Ile Ala Asn Val Gly Arg  
 35 40

<210> 1076  
 <211> 282  
 <212> PRT  
 <213> Pinus radiata

<400> 1076  
 Met Pro Met Leu Ala Glu Thr Tyr Arg Asp Ser Phe Glu Thr Thr Ser  
 1 5 10 15  
 Gly Gly Ser Ser Val Asp Leu Val Gly Met Ala Leu Pro Gly Leu Ala  
 20 25 30  
 Pro Asn Leu Ser Ser Ala Ser Val Ser Ala Ser Ala Ser Glu Asp Ser  
 35 40 45  
 Ala Lys Lys Ile Arg Lys Pro Tyr Thr Ile Thr Lys Ser Arg Glu Ser  
 50 55 60  
 Trp Ser Glu Gln Glu His Asp Lys Phe Leu Glu Ala Leu Gln Leu Phe  
 65 70 75 80  
 Asp Arg Asp Trp Lys Lys Ile Glu Ala Phe Val Gly Ser Lys Thr Val  
 85 90 95  
 Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe Leu Lys Val Gln Lys  
 100 105 110  
 Asn Gly Thr Arg Glu His Val Pro Pro Pro Arg Pro Lys Arg Lys Ala  
 115 120 125  
 Ser His Pro Tyr Pro Gln Lys Ala Ser Lys Asn Val Pro Val Ser Gln  
 130 135 140  
 Gln Val Ser Thr Ala Phe Pro Thr Ala Ala Thr Gln Leu Asp Ser Gly  
 145 150 155 160  
 Tyr Tyr Pro Arg Ala Glu Ser Ser Ser Ile Leu Thr Lys Ser Gly Ser  
 165 170 175  
 Ser Cys Pro Thr Val Ser Ser Trp Val His His Thr Ile Pro Ser Ile  
 180 185 190  
 Asp Ala Ser Phe Val Glu Lys Asp Asp Gly Gly Pro Pro Gly Ile Glu  
 195 200 205  
 Thr Gly Asn Asn Cys Ser Ser Gly Ser Thr Glu Ser Ser Pro Pro Thr  
 210 215 220  
 Trp Pro Pro Cys Ser Glu Ile Pro Glu Lys Val Lys Pro Asp Phe Ser  
 225 230 235 240  
 Gln Val Tyr Lys Phe Ile Gly Ser Val Phe Asp Pro Ser Thr Thr Asp  
 245 250 255  
 His Leu Lys Lys Leu Lys Glu Trp Ile Gln Leu Ile Leu Lys Leu Cys  
 260 265 270  
 Cys Thr His Glu Glu Pro Phe His Asn Leu  
 275 280

<210> 1077  
 <211> 104  
 <212> PRT  
 <213> Pinus radiata

&lt;400&gt; 1077

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Met Gly Arg Ser Phe Ser Cys Trp Ser Cys Ser Lys Asp Asn Gly His
 1           5           10           15
Glu Arg Leu Asn Arg Gly Ser Trp Ser Ala Glu Glu Asp Thr Ile Leu
          20           25           30
Ser Glu His Ile Lys Thr His Gly Val Gly Arg Trp Thr Ser Leu Pro
          35           40           45
Lys Lys Ala Gly Leu Lys Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp
          50           55           60
Phe Asn Tyr Leu Arg Ser Asp Ile Lys His Gly Asn Ile Ser Pro Glu
65           70           75           80
Glu Glu Glu Leu Leu Ile Arg Leu His Arg Leu Leu Gly Asn Arg Trp
          85           90           95
Ser Leu Ile Ala Gly Arg Leu Pro
          100

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&lt;210&gt; 1078

&lt;211&gt; 93

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1078

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Met Asp Arg Asp Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly
 1           5           10           15
Gly Lys Gly Thr Val Arg Arg Lys Lys Lys Ala Val His Arg Ala Thr
          20           25           30
Thr Thr Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Leu Gly Val
          35           40           45
Asn Thr Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Glu Met
          50           55           60
Val Ile His Phe Ile Asn Pro Lys Val Gln Ala Ser Ile Asn Ala Asn
65           70           75           80
Thr Trp Val Val Ser Gly Ser Pro Gln Thr Lys Asn Leu
          85           90

```

&lt;210&gt; 1079

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1079

```

Met Asp Arg Asp Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly
 1           5           10           15
Gly Lys Gly Thr Val Arg Arg Lys Lys Lys Ala Val His Arg Ala Thr
          20           25           30
Thr Thr Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Leu Gly Val
          35           40           45
Asn Thr Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Glu Met
          50           55           60
Val Ile His Phe Ile Asn Pro Lys Val Gln Ala Ser Ile Asn Ala Asn
65           70           75           80
Thr Trp Val Val Ser Gly Ser Pro Gln Thr Lys Asn Leu Gln Asp Leu
          85           90           95
Leu Pro Gly Ile Ile Asn Gln Leu Gly Pro Asp Asn Leu Ile Asn Leu
          100          105          110
Lys Lys Ile Ala Gln Gln
          115

```

&lt;210&gt; 1080

&lt;211&gt; 191

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1080

```

Asp Asp Glu Glu Glu Ala Ser Leu Lys Gly Lys Val Arg Trp Gly Leu
 1          5          10          15
Asp Ser Ile Ala Ala Leu Gly Leu Lys Phe Ile Lys Arg Ala Leu Ala
          20          25          30
Lys Lys Lys Thr Val Gly Ile Ala Gly Gly Ala Asp Arg Val Leu Leu
          35          40          45
Ser Gly Arg Met Lys Leu Lys Pro Lys Gly Leu Met Cys Val Phe Cys
          50          55          60
Gly Leu Leu Arg Val Arg Gly Asn Gly Ile Ile Gly Val Lys Val Phe
65          70          75          80
Leu Glu Lys Tyr Ala Gly Ser Ser Gln Gln Glu Ile Leu Arg Val Glu
          85          90          95
Ile Ser Leu Ser Phe Ala Phe Gln Asn Glu Asp Arg Leu Leu Pro Ala
          100          105          110
Ala Ser Gly Arg Gly Lys Glu Glu Ser Gln Phe Arg Ala Met Ala Cys
          115          120          125
Met Cys Trp Ala Thr Cys Val Pro Thr Cys Cys Trp Glu Pro Cys Cys
          130          135          140
Ile Phe Ser Ser Arg Ser Gln Ala Gly Gly Cys Leu Asn Lys Gln Glu
145          150          155          160
Val Asp Ala His Ile Pro Asn Tyr Pro Asn Leu Pro Pro Gln Leu Ile
          165          170          175
Cys His Tyr Thr Met Leu Leu Cys Arg Gln Met Trp Arg Gln Met
          180          185          190

```

&lt;210&gt; 1081

&lt;211&gt; 86

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1081

```

Ile Asp Ser Ser Glu Lys Arg Leu Lys Gly Lys Asn Tyr Ile Asp Ile
 1          5          10          15
Thr Thr Glu Arg Ala Ala Gln Glu Pro Gly Cys Ile Met Ala Arg Pro
          20          25          30
Gln Arg Tyr Arg Gly Val Arg Gln Arg His Trp Gly Ser Trp Val Ser
          35          40          45
Glu Ile Arg His Pro Leu Leu Lys Thr Arg Ile Trp Leu Gly Thr Phe
          50          55          60
Glu Thr Ala Glu Asp Ala Ala Arg Ala Tyr Asp Glu Ala Ala Arg Met
65          70          75          80
Met Cys Gly Pro Arg Ala
          85

```

&lt;210&gt; 1082

&lt;211&gt; 119

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1082

```

Met Val Arg Ser Pro Cys Cys Asp Lys Val His Thr Asn Asn Lys Gly
 1          5          10          15
Ala Trp Thr Lys Glu Glu Asp Glu Arg Leu Ile Ala His Ile Glu Ala
          20          25          30
His Gly Glu Gly Ser Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu
          35          40          45
Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro

```

50                      55                      60  
 Asp Leu Lys Arg Gly Ser Phe Ser Glu Glu Glu Asp Asp Leu Ile Ile  
 65                      70                      75                      80  
 Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg  
                     85                      90                      95  
 Leu Gln Gly Glu Arg Thr Thr Lys Ile Lys Asn Tyr Trp Asn Thr His  
                     100                      105                      110  
 Met Lys Arg Lys Leu Leu Ser  
                     115

<210> 1083  
 <211> 128  
 <212> PRT  
 <213> Pinus radiata

<400> 1083  
 Met Gly Arg Ser Pro Cys Pro Pro Lys Glu Ala Leu Asn Arg Gly Ala  
 1                      5                      10                      15  
 Trp Thr Gly Met Glu Asp Thr Ile Leu Thr Glu Tyr Ile Arg Val His  
                     20                      25                      30  
 Gly Ser Gly Gly Trp Lys Asp Ile Ser Lys Arg Ala Gly Leu Lys Arg  
                     35                      40                      45  
 Cys Ala Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Asp  
                     50                      55                      60  
 Ile Lys Arg Gly Asn Ile Ser Pro Glu Glu Glu Glu Leu Ile Ile Arg  
 65                      70                      75                      80  
 Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu  
                     85                      90                      95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Met  
                     100                      105                      110  
 Ser Lys Lys Pro Trp Leu Ser Met Asp Glu Ser Gln Ser Asn Thr Ser  
                     115                      120                      125

<210> 1084  
 <211> 126  
 <212> PRT  
 <213> Pinus radiata

<400> 1084  
 Glu Glu Glu Asp Glu Glu Glu Ala Gly Lys Glu Leu Glu Ala Trp Glu  
 1                      5                      10                      15  
 Arg Ala Tyr Ala Asp Glu Arg Ser Trp Glu Thr Leu Gln Glu Asp Glu  
                     20                      25                      30  
 Glu Gly Leu Leu Asn Phe Asp Lys Lys Gln Gln Gln Gln Gln Arg  
                     35                      40                      45  
 Gln Tyr Arg Arg Arg Leu Gln Ser Ala Ala Ala Ala Ser Asn Ile  
                     50                      55                      60  
 Gln Arg Gly Leu Ile Arg Tyr Leu Tyr Ile Ile Ile Asp Phe Ser Arg  
 65                      70                      75                      80  
 Ala Ala Ala Glu Lys Asp Phe Lys Pro Asn Arg Met Val Val Val Ala  
                     85                      90                      95  
 Asn Cys Val Glu Ala Phe Val Arg Glu Phe Phe Asp Gln Asn Pro Leu  
                     100                      105                      110  
 Ser Gln Leu Gly Ile Val Ile Ile Lys Asn Gly Val Ala His  
                     115                      120                      125

<210> 1085  
 <211> 139  
 <212> PRT  
 <213> Pinus radiata

&lt;400&gt; 1085

```

Arg Ala Pro Cys Cys Glu Lys Thr His Thr Asn Lys Gly Ala Trp Ser
1          5          10          15
Lys Asp Glu Asp Glu Ala Leu Val Ala Tyr Ile Gln Ala His Gly Glu
20          25          30
Gly Ser Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Gln Arg Cys Gly
35          40          45
Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu Lys
50          55          60
Arg Gly Asn Phe Ser Pro Glu Glu Asp Glu Ile Ile Lys Leu His
65          70          75          80
Ser Met Leu Gly Asn Lys Trp Ser Leu Ile Ala Ser Lys Leu Pro Gly
85          90          95
Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile Lys Arg
100         105         110
Lys Met Leu Glu Arg Gly Leu Asp Pro Ser Thr His Leu Pro Leu Met
115         120         125
Ser Asp His Gly Ser Phe Glu Ser Ser Ser Lys
130         135

```

&lt;210&gt; 1086

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1086

```

Lys Val Val Pro Pro Leu Asp Phe Thr Gln Gln Pro Pro Ala Gln Glu
1          5          10          15
Leu Thr Ala Arg Asp Leu His Asp Asn Glu Trp Lys Phe Arg His Ile
20          25          30
Phe Arg Gly Gln Pro Lys Arg His Leu Leu Thr Thr Gly Trp Ser Val
35          40          45
Phe Val Ser Ala Lys Arg Leu Ala Ala Gly Asp Ser Val Leu Phe Ile
50          55          60
Trp Asn Glu Lys Gly Gln Leu Leu Leu Gly Ile Arg Arg Ala Asn Arg
65          70          75          80
Pro Gln Ala Val Met Pro Ser Leu Val Leu Ser Ser Asp Ser Met His
85          90          95
Ile Gly Leu Leu Ala Ala Ala Ala His Ala Ala Ala Thr Asn Ser Arg
100         105         110
Phe Thr Ile Phe Tyr Asn Pro Arg Ala Ser Pro Ser Glu Phe Val Ile
115         120         125
Pro Leu Ala Lys Tyr Val Lys Ala Val Tyr His Thr Arg Val Ser Ile
130         135         140
Gly Met Arg Phe Arg Met Leu Phe Glu Thr Glu Glu Ser Ser Val Arg
145         150         155         160
Arg Tyr Met Gly Thr Ile Thr Gly Ile Ser Asp Leu Asp Gln Val Arg
165         170         175
Trp Pro Asn Ser His Trp Arg Ser Val Lys Val Gly Trp
180         185

```

&lt;210&gt; 1087

&lt;211&gt; 132

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1087

```

Trp Glu Phe Ala Asn Asp Cys Phe Arg Lys Gly Glu Lys Gln Leu Leu
1          5          10          15
Cys Glu Ile His Arg Arg Lys Ser Val Gln Gln Ser Ser Ala Ala Pro
20          25          30

```



Ala Ser Arg Cys Val Ser Pro Val Asn Ser Val Glu Glu Gln Ala Leu  
                   35                                  40                                  45  
 Ser Ser Thr Ser Ser Pro Val Ser Ser His Ala Glu Ala Ala Leu Val  
           50                                  55                                  60  
 Asn Cys Gly Gln Asn Ser Thr Ser Gly Leu His Gly Glu Asn Glu Lys  
                                   70                                  75                                  80  
 Leu Arg Lys Asp Asn Leu Leu Leu Met Ser Glu Leu Ala Gln Met Lys  
                                   85                                  90                                  95  
 Lys Gln Cys Asn Asp Leu Leu Leu Phe Leu Ser Lys Cys Val Asn Ile  
                                   100                                  105                                  110  
 Thr Pro Asp Asn Leu Ser Asn Ile Leu Ile Ala Ala Ser Gln Thr Asn  
                                   115                                  120                                  125  
 Cys Arg Asp Glu  
           130

<210> 1088  
 <211> 214  
 <212> PRT  
 <213> Pinus radiata

<400> 1088  
 Gly Lys Trp Gly Val Pro Asp Asn Leu Tyr Gly Ala Gln Glu Asp Ser  
   1                                  5                                  10                                  15  
 Gly Gly Ser Ser Val Lys Gln Lys Asn Leu Lys Asp Gly Asp Gln Phe  
                                   20                                  25                                  30  
 Thr Ser Ser Asp Glu Ala Asp Ser Glu Val Asn Glu Phe Asn Ile Met  
                                   35                                  40                                  45  
 Lys Arg Ser Asn Ser Gly Val Gly Tyr Glu Asp Asn Lys Arg Ser Gly  
                                   50                                  55                                  60  
 Gly Gln Gly Asp Gly Asn Gln Tyr Arg Ser Arg His Ser Arg Ser Ile  
                                   65                                  70                                  75                                  80  
 Ser Met Asp Ser Ile Met Ser Lys Met His Asn Phe Ser Glu Asp Leu  
                                   85                                  90                                  95  
 Glu Gln Glu Pro Ser Gln Gly Arg Asn Val Arg His Ser His Ser Asn  
                                   100                                  105                                  110  
 Ser Met Asp Gly Ser Thr Asn Phe Asn Val Glu Phe Gly Asn Gly Glu  
                                   115                                  120                                  125  
 Phe Ser Ala Ser Glu Met Lys Lys Ile Met Ala Ser Glu Lys Leu Ala  
                                   130                                  135                                  140  
 Glu Leu Ala Thr Val Asp Pro Lys Arg Val Lys Arg Ile Leu Ala Asn  
                                   145                                  150                                  155                                  160  
 Arg Gln Ser Ala Ala Arg Ser Lys Glu Arg Lys Met Arg Tyr Ile Ser  
                                   165                                  170                                  175  
 Glu Leu Glu Arg Lys Val Gln Thr Leu Gln Thr Glu Ala Thr Thr Leu  
                                   180                                  185                                  190  
 Ser Ala Gln Leu Thr Leu Leu Gln Arg Asp Gln Leu Asp Trp Ala Val  
                                   195                                  200                                  205  
 Arg Thr Thr Ser Ser Ser  
           210

<210> 1089  
 <211> 97  
 <212> PRT  
 <213> Pinus radiata

<400> 1089  
 Met Ala Asp Gly His Gln Phe Asn Asn Ile Leu Leu Val Gly Arg Gly  
   1                                  5                                  10                                  15  
 Gly Thr Asn Pro Gly Gln Leu Arg Ile His Ser Gly Gly Ile Val Trp  
                                   20                                  25                                  30  
 Arg Arg Gln Gly Gly Gly Lys Val Val Asp Val Ala Lys Asn Glu Val

35 40 45  
 Lys Ser Leu Ser Trp Thr Arg Val Pro Arg Gly Tyr Gln Leu Gly Val  
 50 55 60  
 Lys Leu Lys Ala Gly Leu Asn Ile Lys Leu Ala Gly Phe Arg Glu Gln  
 65 70 75 80  
 Asp Val Gly Asn Leu Thr Asn Phe Met Thr Asn Thr Ile Gly Leu Ala  
 85 90 95  
 Pro

<210> 1090  
 <211> 108  
 <212> PRT  
 <213> Pinus radiata

<400> 1090  
 Met Gly Asp His Ser Gly Gly Glu Ser Ser Pro His Ser Asp Ile Glu  
 1 5 10 15  
 Ser Thr Gly Ile His Asn Asn Gly Ser Ser Ser Ser Gln Ser Ile  
 20 25 30  
 Ile Arg Glu Gln Asp Arg Leu Leu Pro Ile Ala Asn Val Gly Arg Ile  
 35 40 45  
 Met Lys Lys Thr Leu Pro Thr Asn Ala Lys Ile Ser Lys Glu Ala Lys  
 50 55 60  
 Glu Ile Met Gln Glu Cys Val Ser Glu Phe Ile Ser Phe Val Thr Gly  
 65 70 75 80  
 Glu Ala Ser Asp Lys Cys His Lys Glu Lys Arg Lys Thr Ile Asn Gly  
 85 90 95  
 Asp Asp Ile Leu Trp Ala Met Thr Thr Leu Gly Phe  
 100 105

<210> 1091  
 <211> 90  
 <212> PRT  
 <213> Pinus radiata

<400> 1091  
 Arg Asn Ile Gln Arg Asn Glu Tyr His Asn Leu Phe Asn Phe Ile Ser  
 1 5 10 15  
 Ser Lys Gly Leu Lys Ile Met Asn Leu Gly Asp Ala His Gly Thr Ser  
 20 25 30  
 Gly Val Ala Ala Val Leu Glu Asn Ser Asp Asp Glu Ala Val Asp Pro  
 35 40 45  
 His Leu Glu Arg Ile Lys Ser Ala Arg Glu Gly Gly Ala Gly Glu Asp  
 50 55 60  
 Ser Asp Glu Glu Ala Cys Tyr Thr Gly Asp Leu Ser Leu Ile Cys Ala  
 65 70 75 80  
 Val Val Lys Glu Leu Ile Cys Thr His Asp  
 85 90

<210> 1092  
 <211> 133  
 <212> PRT  
 <213> Pinus radiata

<400> 1092  
 Met Gly Cys Val Ser Ser Lys Val Glu Asn Glu Glu Leu Val Lys Arg  
 1 5 10 15  
 Cys Arg Asp Arg Arg Arg Leu Met Lys Gln Ala Val Asn Ser Arg His  
 20 25 30  
 Asn Phe Ala Ala Ala His Ile Ala Tyr Leu Arg Ala Leu Gln Asn Thr

35 40 45  
 Gly Asn Ala Leu Val Gln Phe Ala Glu Gly Glu Ser Ser Ala Met Asn  
 50 55 60  
 Gly Asn Ala Ile Glu Glu Ala Ala Thr Pro Met Pro Ala Thr Pro Leu  
 65 70 75 80  
 Thr Ala Ser His Arg His Pro Met Lys Phe His Pro Pro Pro Pro Pro  
 85 90 95  
 Pro Pro Pro Pro Leu Val Pro Ser Ser Pro Ser Val Ser Pro Ser Met  
 100 105 110  
 Glu Ser Phe Arg Met Pro Ser Lys His Asn Pro Leu Ser Arg Ser Thr  
 115 120 125  
 Ser Asp Ile Ser Tyr  
 130

<210> 1093  
 <211> 148  
 <212> PRT  
 <213> Pinus radiata

<400> 1093  
 Met Gly Arg Ala Pro Cys Cys Thr Lys Val Gly Leu Asn Lys Gly Ala  
 1 5 10 15  
 Trp Ser Ala Glu Glu Asp Ser Leu Leu Gly Arg Tyr Ile Gln Thr His  
 20 25 30  
 Gly Glu Gly Asn Trp Arg Ser Leu Pro Lys Lys Ala Gly Leu Arg Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Cys  
 50 55 60  
 Ile Lys Arg Gly Asn Ile Thr Thr Asp Glu Glu Leu Ile Ile Arg  
 65 70 75 80  
 Met His Ala Leu Leu Gly Asn Arg Trp Ser Ile Ile Ala Gly Arg Val  
 85 90 95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr Asn Leu  
 100 105 110  
 Ser Lys Lys Leu Ala Val Arg Gly Ile Asp Pro Lys Thr His Lys Lys  
 115 120 125  
 Ile Thr Thr Asp Gly Thr Asn Arg Val Asn Gly Asp Arg Phe Ser Gln  
 130 135 140  
 Arg Lys Gly Glu  
 145

<210> 1094  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

<400> 1094  
 Arg Gln Leu Ile Arg Glu Leu Glu Gln Met Phe Asn Ile Glu Gly Glu  
 1 5 10 15  
 Leu Glu Asp Pro Ser Lys Gly Trp Gln Val Val Tyr Thr Asp Asn Glu  
 20 25 30  
 Gly Asp Met Met Leu Val Gly Asp Asp Pro Trp Gln Glu Phe Cys Ser  
 35 40 45  
 Ile Val Arg Lys Ile Tyr Ile Tyr Thr Arg Glu Glu Val Glu Lys Met  
 50 55 60  
 Thr Pro Gln Thr Pro Ser Ala Asn Ser Arg Asp Val Gln Lys Ser Leu  
 65 70 75 80  
 Ser Gln Glu Glu Thr Ser Arg Ser Ser Asp Arg Gln Asp Ser Ser Ile  
 85 90 95  
 Ala Gly Val Thr Ala Glu Arg Ser Ser Asp Ala  
 100 105

<210> 1095  
 <211> 275  
 <212> PRT  
 <213> Pinus radiata

<400> 1095  
 Met Ser Asn Gly Arg Leu Cys Glu Asp Leu Asp Arg Ile Lys Gly Pro  
 1 5 10 15  
 Trp Ser Pro Glu Glu Asp Ala Ser Leu Gln Arg Leu Val Gln Lys Tyr  
 20 25 30  
 Gly Pro Arg Asn Trp Thr Leu Ile Ser Lys Gly Ile Pro Gly Arg Ser  
 35 40 45  
 Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser Pro Gln Val  
 50 55 60  
 Glu His Arg Pro Phe Thr Pro Ser Glu Asp Ala Ala Ile Leu Gln Ala  
 65 70 75 80  
 His Ala Gln His Gly Asn Lys Trp Ala Thr Ile Ala Arg Ala Leu Pro  
 85 90 95  
 Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn Ser Thr Leu Arg  
 100 105 110  
 Arg Arg Cys Arg Asp Pro Lys Lys Gly Ile Val Val His Leu Asp Asp  
 115 120 125  
 Glu Ile Ser Ser Leu Asp Ala Ala Arg Lys Arg Ser Ser Asp Gly Phe  
 130 135 140  
 Ser His Asp Gly Ser Ser Ala Leu Glu Asp Asn Gly Cys Ser Ser Trp  
 145 150 155 160  
 Glu Val Asp Ser Lys Arg Leu Lys Arg Leu Gly Glu Leu Gly Thr Glu  
 165 170 175  
 Gln Gly Pro Glu Val Glu Ala Glu Val Glu Val Ser Asp Arg Ser Asp  
 180 185 190  
 Ala Asn Pro Gly Arg Val Leu Tyr Arg Pro Val Pro Val Ser Phe  
 195 200 205  
 Phe Ser Ser Phe Gly Lys Thr Val Ala Asn Leu Gln Glu Thr Ala Ala  
 210 215 220  
 Gly Ala Val Gly Val Asp Pro Pro Thr Ser Leu Ser Leu Ser Leu Pro  
 225 230 235 240  
 Gly Leu Asp Pro Ala Ile Pro Ser Pro Lys Leu Ser Thr Gln Lys Asp  
 245 250 255  
 Ser His Asn Asn Ser Thr Val Asn Asn Asn Ile Pro Ile Pro Pro Val  
 260 265 270  
 Val Asn Thr  
 275

<210> 1096  
 <211> 128  
 <212> PRT  
 <213> Pinus radiata

<400> 1096  
 Glu Phe Gly Arg Ser Ser Glu Lys Gly Arg Gly Tyr Gly Arg Gly Arg  
 1 5 10 15  
 Gly Arg Gly Gly Arg Gly Gly Tyr Gly Asn Asp Ala Gly Asp Glu Ser  
 20 25 30  
 Gln Arg Pro Arg Arg Gln Tyr Glu Arg Arg Ser Gly Thr Gly Arg Gly  
 35 40 45  
 Tyr Glu Val Lys Arg Glu Gly Ala Gly Gln Gly Asn Trp Gly Thr Pro  
 50 55 60  
 Thr Asp Gln Gly Phe Thr Glu Glu Pro Glu Glu Leu Ser Arg Ala Glu  
 65 70 75 80  
 Glu Glu Lys Thr Val Thr Pro Glu Lys Gln Glu Glu Gln Lys Pro Ser

			85						90				95			
Glu	Glu	Ser	Asn	Gln	Glu	Ile	Pro	Ala	Pro	Glu	Ser	Glu	Glu	Lys	Lys	
			100					105					110			
Glu	Glu	Glu	Glu	Asp	Lys	Asp	Met	Thr	Leu	Asp	Glu	Tyr	Glu	Lys	Val	
			115				120					125				

<210> 1097  
 <211> 135  
 <212> PRT  
 <213> Pinus radiata

<400> 1097

Ala	Val	Asn	Ser	Ser	Leu	Ser	Val	Gly	Met	Arg	Phe	Lys	Met	Arg	Phe	
1				5					10					15		
Glu	Gly	Glu	Glu	Ser	Pro	Glu	Arg	Arg	Phe	Thr	Gly	Thr	Ile	Ile	Gly	
			20					25					30			
Met	Gly	Glu	Val	Asp	Asn	Val	Arg	Trp	Pro	Glu	Ser	Lys	Trp	Arg	Ser	
			35				40					45				
Leu	Lys	Val	Gln	Trp	Asp	Glu	Thr	Ser	Val	Val	Pro	Arg	Pro	Glu	Arg	
	50				55					60						
Val	Ser	Pro	Trp	Glu	Ile	Glu	Thr	Phe	Val	Ala	Ser	Ser	Ala	Ala	Leu	
65				70					75						80	
Asn	Pro	Leu	Pro	Ala	Pro	Arg	Thr	Lys	Lys	Pro	Arg	Pro	Asn	Leu	Val	
			85					90					95			
Ser	Ser	Ser	Gln	Glu	Leu	Met	Ile	His	Gly	Ser	Gly	Lys	Thr	Ala	Thr	
			100					105					110			
Asp	Ser	Ser	Gln	Val	His	Arg	Leu	Pro	Arg	Val	Leu	Gln	Gly	Gln	Glu	
			115				120					125				
Met	Arg	Thr	Phe	Gly	Gly	Ser										
	130					135										

<210> 1098  
 <211> 46  
 <212> PRT  
 <213> Pinus radiata

<400> 1098

Ala	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Leu	Asn	Tyr	Leu	Arg	Pro	Asp	Ile	
1				5					10					15		
Lys	Arg	Gly	Asn	Ile	Ser	Pro	Glu	Glu	Glu	Leu	Ile	Ile	Arg	Leu		
			20					25				30				
His	Arg	Leu	Leu	Gly	Asn	Arg	Tyr	Val	Glu	Asn	Arg	Gly	Thr			
			35				40					45				

<210> 1099  
 <211> 113  
 <212> PRT  
 <213> Pinus radiata

<400> 1099

Met	Gly	Arg	Ser	Pro	Cys	Cys	Ser	Lys	Glu	Gly	Leu	Asn	Arg	Gly	Ala	
1				5					10					15		
Trp	Thr	Lys	Arg	Glu	Asp	Met	Ile	Leu	Ser	Glu	Tyr	Val	Arg	Ile	His	
			20					25					30			
Gly	Asp	Gly	Gly	Trp	Arg	Asn	Leu	Pro	Glu	Lys	Ala	Gly	Leu	Lys	Arg	
			35				40					45				
Cys	Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Leu	Asn	Tyr	Leu	Arg	Pro	Asp	
	50				55					60						
Ile	Lys	Arg	Gly	Asn	Ile	Cys	Pro	Ala	Glu	Glu	Glu	Leu	Ile	Ile	Arg	
65				70					75						80	
Leu	His	Arg	Leu	Leu	Gly	Asn	Arg	Trp	Ser	Leu	Ile	Ala	Gly	Arg	Leu	

				85						90					95				
Pro	Gly	Arg	Thr	Asp	Asn	Glu	Ile	Lys	Asn	Tyr	Trp	Asn	Thr	His	Leu				
			100					105					110						
Ser																			

<210> 1100  
 <211> 148  
 <212> PRT  
 <213> Pinus radiata

<400> 1100

Pro	Tyr	Leu	His	Glu	Ser	Arg	His	Leu	His	Ala	Met	Lys	Arg	Ala	Arg				
1					5				10					15					
Gly	Cys	Gly	Gly	Arg	Phe	Leu	Asn	Thr	Lys	Lys	Leu	Glu	Asp	Ser	Lys				
			20					25					30						
Ala	Asn	Val	Asp	Asn	Gly	Lys	Thr	Pro	Glu	Gly	His	Thr	Ala	Gln	Ala				
			35				40					45							
Gly	Ser	Ser	Ser	Gly	Ser	Glu	Val	Leu	Gln	Ser	Glu	Asn	Gly	Asn	Gly				
	50				55				60										
Asn	Ser	Thr	Gln	Glu	Leu	His	Gly	Ala	Cys	Gly	Met	Ser	Gly	Ser	Gln				
65					70				75						80				
Val	Thr	Ser	Ile	Ala	Gln	Ser	Ser	Glu	Asn	Gly	Thr	Thr	Tyr	Gln	Tyr				
				85					90					95					
Ser	His	Thr	Asn	Gly	Ala	Tyr	Leu	Asn	His	Tyr	Gln	His	Pro	His	Phe				
			100					105					110						
His	Ile	Ser	Ala	Phe	His	Pro	Leu	Ser	Ser	Gly	Gly	Glu	Glu	Gly	Ser				
		115					120					125							
Ser	Ala	Lys	Gly	Gly	Ser	Ile	Ile	Ser	Gly	Gly	Ser	Gln	Gln	Arg	Val				
	130					135					140								
Val	Val	Ile	Gln																
145																			

<210> 1101  
 <211> 48  
 <212> PRT  
 <213> Pinus radiata

<400> 1101

Met	Gly	Arg	Ser	Pro	Cys	Pro	Pro	Lys	Glu	Ala	Leu	Asn	Arg	Gly	Ala				
1				5				10						15					
Trp	Thr	Gly	Met	Glu	Asp	Thr	Ile	Leu	Thr	Glu	Tyr	Ile	Arg	Val	His				
			20					25					30						
Gly	Ser	Gly	Gly	Trp	Lys	Ala	Ile	Ser	Lys	Arg	Ala	Gly	Glu	Cys	Gln				
		35					40					45							

<210> 1102  
 <211> 191  
 <212> PRT  
 <213> Pinus radiata

<400> 1102

Val	Thr	Arg	Pro	Gly	Lys	Phe	Arg	Ser	Cys	Gln	Asp	Gly	Tyr	Ala	Val				
1				5				10						15					
Arg	Ala	Ser	Leu	Lys	Ala	Glu	Asp	Gly	Val	Leu	Tyr	Pro	Leu	Glu	Lys				
			20					25					30						
Ser	Phe	Phe	Phe	Leu	Pro	Lys	Pro	Pro	Thr	Leu	Ile	Leu	His	Glu	Glu				
		35					40					45							
Ile	Glu	Tyr	Leu	Glu	Phe	Glu	Arg	His	Gly	Ala	Ala	Gly	Thr	Ser	Ser				
	50					55					60								
Met	Ser	Ser	His	Tyr	Phe	Asp	Leu	Ile	Ile	Lys	Leu	Lys	Ser	Glu	Gln				

65					70					75				80	
Glu	His	Gln	Phe	Arg	Asn	Ile	Gln	Arg	Asn	Glu	Tyr	His	Asn	Leu	Phe
				85					90					95	
Ser	Phe	Ile	Asn	Thr	Lys	Gly	Leu	Lys	Ile	Ile	Asn	Leu	Gly	Ala	Thr
			100					105					110		
Glu	Thr	Ile	Gly	Gly	Val	Ala	Ala	Ala	Leu	Gln	Asn	Ser	Asp	Asp	Glu
			115					120					125		
Ala	Val	Asp	Pro	His	Leu	Glu	Arg	Ile	Lys	Ile	Tyr	Val	Met	Val	Glu
			130					135					140		
Leu	Val	Leu	Lys	Thr	Ala	Thr	Lys	Arg	Met	Lys	Thr	Leu	Leu	Gln	Lys
145					150					155					160
Thr	Met	Met	Leu	Asp	Leu	Gln	Gln	Met	Ser	Gln	Lys	Lys	Arg	Asp	Gln
			165						170					175	
Met	Gln	Val	Arg	Val	Gln	Arg	Ser	Ser	Asn	Leu	Gln	Arg	Lys	Lys	
			180					185						190	

<210> 1103  
 <211> 106  
 <212> PRT  
 <213> Pinus radiata

<400> 1103

Met	Ser	Pro	Pro	Ser	Tyr	Ser	Met	Phe	Pro	Asn	Ser	Gly	Met	Gly	
1				5				10					15		
Leu	Asn	Pro	Ser	Val	Thr	Ser	Ser	Glu	Pro	Ser	Ser	Gln	Val	Ser	Gly
			20					25				30			
Ser	Ile	Pro	His	Gln	Tyr	Ser	Gly	Ser	Glu	Glu	Asp	Pro	Lys	Leu	Thr
			35				40					45			
Ile	Asp	Glu	Arg	Lys	Gln	Lys	Arg	Met	Leu	Ser	Asn	Arg	Glu	Ser	Ala
	50					55					60				
Arg	Arg	Ser	Arg	Met	Arg	Lys	Gln	Gln	His	Leu	Asp	Glu	Leu	Arg	Ala
65					70					75					80
Arg	Thr	Ala	His	Leu	Arg	Ala	Glu	Asn	Ser	His	Met	Leu	Thr	Lys	Phe
			85					90						95	
Asn	Ile	Ala	Ser	Gln	Lys	Tyr	Met	Gln	Leu						
			100					105							

<210> 1104  
 <211> 162  
 <212> PRT  
 <213> Pinus radiata

<400> 1104

Arg	Gly	Gln	Pro	Arg	Arg	His	Leu	Leu	Thr	Thr	Gly	Trp	Ser	Val	Phe
1				5					10					15	
Val	Ser	Ala	Lys	Arg	Leu	Val	Ala	Gly	Asp	Ala	Phe	Ile	Phe	Leu	Arg
			20					25					30		
Gly	Glu	Asn	Ser	Glu	Leu	Arg	Val	Gly	Val	Arg	Arg	Val	Met	Arg	Gln
		35					40					45			
Gln	Ser	Asn	Met	Pro	Ser	Ser	Val	Ile	Ser	Ser	His	Ser	Met	His	Leu
	50					55					60				
Gly	Val	Ile	Ala	Thr	Ala	Ser	His	Ala	Val	Thr	Thr	Arg	Thr	Met	Phe
65					70					75					80
Thr	Val	Tyr	Tyr	Lys	Pro	Arg	Thr	Ser	Gln	Ser	Glu	Phe	Ile	Ile	Pro
			85					90						95	
Tyr	Asp	Lys	Tyr	Met	Glu	Ala	Val	Asn	Ser	Asn	Leu	Ser	Val	Gly	Met
			100					105					110		
Arg	Phe	Lys	Met	Arg	Phe	Glu	Gly	Glu	Glu	Ala	Pro	Glu	Arg	Arg	Phe
		115					120					125			
Thr	Gly	Thr	Ile	Ile	Gly	Ile	Gly	Asp	Val	Asp	Pro	Ser	Arg	Trp	Pro
	130					135					140				

Ser Ser Lys Trp Arg Ser Leu Lys Val Gln Trp Asp Glu Thr Cys Ala  
 145 150 155 160  
 Ile Pro

<210> 1105  
 <211> 115  
 <212> PRT  
 <213> Pinus radiata

<400> 1105  
 Met Ala Gln Ser Glu Glu Gln Pro Asn Glu Ala Thr Val Pro Arg Pro  
 1 5 10 15  
 Ala Asp Ser His Arg Ser Ile Pro Thr Pro Phe Leu Met Lys Thr Tyr  
 20 25 30  
 Arg Leu Val Asp Asp Pro Ser Leu Asn Asp Ile Ile Ser Trp Asn Glu  
 35 40 45  
 Asp Gly Thr Thr Phe Ile Val Trp Arg Pro Ala Glu Phe Ala Arg Asp  
 50 55 60  
 Leu Leu Pro Asn Tyr Phe Lys His Asn Asn Phe Ser Ser Phe Val Arg  
 65 70 75 80  
 Gln Leu Asn Thr Tyr Gly Phe Arg Lys Ile Val Pro Asp Arg Trp Glu  
 85 90 95  
 Phe Ala Asn Glu Phe Phe Arg Arg Gly Glu Lys Lys Leu Leu Cys Glu  
 100 105 110  
 Ile His Arg  
 115

<210> 1106  
 <211> 37  
 <212> PRT  
 <213> Pinus radiata

<400> 1106  
 Met Gly Arg Ala Pro Cys Cys Thr Lys Val Gly Leu Asn Lys Gly Ala  
 1 5 10 15  
 Trp Ser Ala Glu Glu Asp Ser Leu Leu Gly Arg Tyr Ile Gln Thr His  
 20 25 30  
 Gly Glu Gly Asn Trp  
 35

<210> 1107  
 <211> 187  
 <212> PRT  
 <213> Pinus radiata

<400> 1107  
 Thr Arg Ser Gly Ser Lys Asn Ser Ala Arg Ala Pro Val Ser Gly Phe  
 1 5 10 15  
 Ser Met Asn Ser Asn Met Gly Val Ser Gly Gly Leu Asp Glu Ser Gly  
 20 25 30  
 Phe Ser Gln Pro Pro Pro Asn Phe Ala Lys Met Asn Ala Pro Thr Arg  
 35 40 45  
 Thr Phe Thr Lys Val Tyr Lys Leu Gly Ser Val Gly Arg Ser Val Asp  
 50 55 60  
 Val Thr Arg Phe Arg Gly Tyr Pro Asp Leu Arg Ala Glu Leu Asp Arg  
 65 70 75 80  
 Met Phe Gly Leu Glu Gly Gln Leu Glu Asn Pro Arg Ser Ser Trp Gln  
 85 90 95  
 Leu Val Phe Val Asp Lys Glu Lys Asp Val Leu Leu Leu Gly Asp Asp  
 100 105 110



Pro Trp Glu Glu Phe Val Asn Asn Val Arg Phe Ile Lys Ile Leu Ser  
 115 120 125  
 Pro Pro Glu Val Gln Gln Met Ser Gln Glu Asp Met Glu Phe Trp Ser  
 130 135 140  
 Ser Ile Pro Thr Gln Gln Gln Thr Ser Ser Ser Ser Asp Asp Cys Val  
 145 150 155 160  
 Ala Arg Asn Ser Ser Arg Asn Ile Arg Ser Val Leu Thr Ser Pro Gly  
 165 170 175  
 Ser Leu Asp Val Leu Ser Val Asp Pro Ile Val  
 180 185

<210> 1108  
 <211> 130  
 <212> PRT  
 <213> Pinus radiata

<400> 1108  
 His Asp Asn Glu Trp Lys Phe Arg His Ile Tyr Arg Gly Gln Pro Lys  
 1 5 10 15  
 Arg His Leu Leu Thr Thr Gly Trp Ser Val Phe Val Ser Ala Lys Arg  
 20 25 30  
 Leu Ser Ala Gly Asp Ala Val Leu Phe Ile Arg Asn Glu Lys Gly Gln  
 35 40 45  
 Leu Leu Leu Gly Ile Arg Arg Ala Asn Arg Ser Gln Thr Val Met Pro  
 50 55 60  
 Ser Ser Val Leu Ser Ser Asp Ser Met His Ile Gly Val Leu Ala Ala  
 65 70 75 80  
 Ala Ala His Ala Ala Ser Thr Asn Cys Arg Phe Thr Ile Phe Tyr Asn  
 85 90 95  
 Pro Arg Ala Ser Pro Ser Glu Phe Val Ile Pro Leu Ser Lys Tyr Glu  
 100 105 110  
 Lys Ala Val Tyr His Thr Arg Val Ser Ile Gly Met Arg Phe Arg Met  
 115 120 125  
 Leu Phe  
 130

<210> 1109  
 <211> 81  
 <212> PRT  
 <213> Pinus radiata

<400> 1109  
 Met Gly Arg Thr Pro Cys Cys Glu Lys Gly His Thr Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His  
 20 25 30  
 Gly Glu Gly Arg Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro His  
 50 55 60  
 Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Phe Ile Ile Lys  
 65 70 75 80  
 Leu

<210> 1110  
 <211> 146  
 <212> PRT  
 <213> Pinus radiata

<400> 1110

Met Gly Arg Ala Pro Cys Trp Asp Lys Met Gly Val Lys Lys Gly Ala  
 1 5 10 15  
 Trp Thr Leu Asp Glu Asp Lys Ile Leu Val Asp Tyr Ile Thr Lys His  
 20 25 30  
 Gly His Gly Asn Trp Arg Ala Leu Pro Lys Gln Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Lys Pro Asp  
 50 55 60  
 Ile Lys Arg Gly Asn Phe Ser Pro Glu Glu Glu Asp Gln Ile Ile Lys  
 65 70 75 80  
 Leu His Glu Leu Ile Gly Asn Arg Trp Ser Thr Ile Ala Ser Tyr Leu  
 85 90 95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Val Trp Asn Thr His Leu  
 100 105 110  
 Lys Lys Arg Leu Ala Arg Met Lys Ala Asp Ser Val Ala Val Asp Ala  
 115 120 125  
 Gln Pro Thr Pro Ala Ser Ser Leu Ala Ser Ser Thr Thr Glu Met Thr  
 130 135 140  
 Cys His  
 145

<210> 1111  
 <211> 72  
 <212> PRT  
 <213> Pinus radiata

<400> 1111  
 Cys Ile Glu Ala Asn Gly Gly Gly Ala Pro Gly Arg Ser Leu Pro Lys  
 1 5 10 15  
 Ala Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile  
 20 25 30  
 Asn Tyr Leu Arg Pro Asp Asp Val Lys Arg Gly Asn Phe Thr Glu Glu  
 35 40 45  
 Glu Asp Asp Leu Ile Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp  
 50 55 60  
 Ser Leu Ile Ala Gly Arg Leu Pro  
 65 70

<210> 1112  
 <211> 112  
 <212> PRT  
 <213> Pinus radiata

<400> 1112  
 Met Arg Arg Leu Arg Cys Glu Lys Gly Asn Thr Asn Lys Gly Ala Trp  
 1 5 10 15  
 Thr Gln Gln Glu Asp Ala Arg Leu Ile Ala Tyr Ile Arg Ala His Gly  
 20 25 30  
 Glu Gly Gly Trp His Ser Leu Pro Arg Ala Ala Gly Leu Leu Arg Cys  
 35 40 45  
 Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asn Leu  
 50 55 60  
 Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Asp Leu Ile Ile Lys Leu  
 65 70 75 80  
 His Asn Leu Leu Gly Asp Lys Trp Ser Leu Ile Ala Gly Arg Leu Pro  
 85 90 95  
 Gly Arg Met Glu Asp Gln Ile Lys Asn Tyr Trp Asp Thr His Phe Lys  
 100 105 110

<210> 1113  
 <211> 148

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1113

Gly Lys Glu Val His Ile Ala Glu Pro Asp Gln Val Ser Asp Pro Pro  
 1 5 10 15  
 Lys Ala Ile Lys Tyr Glu Pro Pro Ala Val Ser Cys Asp Gln Glu Lys  
 20 25 30  
 Pro Leu Gln Lys Leu Ser Lys Glu Thr Gln Val Lys Gln His Gly Asn  
 35 40 45  
 Pro Thr Arg Ser Cys Thr Lys Val His Lys Gln Gly Ile Ala Leu Gly  
 50 55 60  
 Arg Ala Val Asp Leu Thr Lys Phe Glu Gly Tyr Glu Glu Leu Ile Cys  
 65 70 75 80  
 Glu Leu Glu Arg Met Phe Asn Ile Glu Gly Glu Leu Arg Asn Pro Ser  
 85 90 95  
 Lys Gly Trp Gln Val Val Tyr Thr Asp Asn Glu Gly Asp Met Met Leu  
 100 105 110  
 Val Gly Asp Asp Pro Trp Gln Glu Phe Cys Ser Ile Val Arg Lys Ile  
 115 120 125  
 Phe Ile Tyr Thr Arg Glu Glu Val Glu Lys Met Thr Pro Gln Lys His  
 130 135 140  
 Ala Lys Leu Gln  
 145

&lt;210&gt; 1114

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1114

Glu Thr Gln Ser Ser Asp Asn Asn Tyr Met Val Gly Phe Val Leu Ala  
 1 5 10 15  
 Asn Val Val Gly Leu Gln Tyr Tyr Thr Gly Thr Ile Asn Gly Arg Glu  
 20 25 30  
 Met Ile Arg Leu Val Arg Glu Pro Glu Asn Arg Tyr Asp Pro Asn Ala  
 35 40 45  
 Ile Lys Val Leu Asn Met Ser Gly Gln Gln Val Gly His Ile Glu Arg  
 50 55 60  
 Ala Val Ala Leu Ala Leu Ala Ser His Val Asp Gln Ser Leu Ile Leu  
 65 70 75 80  
 Ile Glu Gly Ile Val Ser Arg Ala Leu His Lys Gly Ala Tyr Lys Leu  
 85 90 95  
 Pro Cys Gln Ile Tyr Ile Phe Ser His Arg Asp Ser Met Gly Met Val  
 100 105 110  
 Leu Gln Leu Leu Lys Gly Ala Gly Leu Asn Val Ile Thr Ala Glu Asp  
 115 120 125  
 Gln Glu Phe Leu Thr Ala Glu Ser Ile Ala Ala Lys Glu Ile Tyr Glu  
 130 135 140  
 Asp Pro Gly Val Lys Glu Val Arg Arg Val Asp Asp Ile Phe Gly Ser  
 145 150 155 160  
 Leu Asn Asn Pro Lys Lys Arg Gln Ser Met Glu Ala Cys Glu Leu Val  
 165 170 175  
 Thr Ser Thr Leu Leu Gln His Gln Lys Glu Ala Leu Ala Trp Met Val  
 180 185 190  
 Gln Arg Glu Asn Ser Ser Glu Leu Pro Pro Phe Trp Asp Val Cys Asp  
 195 200 205  
 Lys Thr Ser Lys Ser Gln Gln Leu Arg Tyr Lys Asn Val Leu Thr Asn  
 210 215 220  
 Phe Glu Thr Asn Gly Arg Pro Lys Pro Leu Arg Gly Gly Ile Leu Ala  
 225 230 235 240

[illegible]

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<210> 1115
<211> 129
<212> PRT
<213> Pinus radiata
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[illegible]

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<210> 1116
<211> 90
<212> PRT
<213> Pinus radiata
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<div> <div>&lt;400&gt;</div> <div>1116</div> </div>															
Met	Asp	Arg	Glu	Lys	Leu	Met	Lys	Met	Ala	Gly	Ala	Val	Arg	Thr	Gly
1				5					10					15	
Gly	Lys	Gly	Thr	Met	Arg	Arg	Lys	Lys	Lys	Thr	Ile	His	Lys	Thr	Ala
			20					25					30		
Thr	Ala	Asp	Asp	Lys	Arg	Leu	Gln	Ser	Thr	Leu	Lys	Arg	Ile	Gly	Val
		35					40					45			
Asn	Asn	Ile	Pro	Ala	Ile	Glu	Glu	Val	Asn	Ile	Phe	Lys	Asp	Asp	His
	50					55					60				
Val	Ile	His	Phe	Ala	Asn	Pro	Lys	Val	Gln	Ala	Ser	Ile	Ala	Ala	Asn
65					70					75					80
Thr	Trp	Val	Gly	Ser	Gly	His	Arg	Lys	Gln						
				85					90						

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<210> 1117
<211> 33
<212> PRT
<213> Pinus radiata
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<400> 1117  
Gly Lys Thr Gln Met Lys Leu Lys Arg Glu Arg Asp Gln Gln Ala Arg  
1 5 10 15  
Asp Ala Ser Lys Arg Arg Asn Gly Leu Lys Lys Ala Tyr Glu Leu  
20 25 30

Ser

<210> 1118  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

<400> 1118  
 Met Gly Arg Ala Pro Cys Cys Ala Asn Gly Asp Arg Ser Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Thr Gln Tyr Ile Gln Ala His  
 20 25 30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
 50 55 60  
 Leu Lys Arg Gly Gly Phe Ser Glu Asp Glu Asp Asp Leu Ile Leu Lys  
 65 70 75 80  
 Leu His Ala Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu  
 85 90 95  
 Pro Gly Arg Thr Gly His Gln Asn Gln Asn Tyr  
 100 105

<210> 1119  
 <211> 112  
 <212> PRT  
 <213> Pinus radiata

<400> 1119  
 Arg Lys Ser Asn Val His Ser Phe Cys Lys Thr Leu Thr Ala Ser Asp  
 1 5 10 15  
 Thr Ser Thr His Gly Gly Phe Ser Val Leu Arg Arg His Ala Asp Glu  
 20 25 30  
 Cys Leu Pro Pro Leu Asp Met Ser Gln Gln Pro Pro Ser Gln Glu Leu  
 35 40 45  
 Val Ala Arg Asp Leu His Gly Met Glu Trp Arg Phe Arg His Ile Phe  
 50 55 60  
 Arg Gly Gln Pro Arg Arg His Leu Leu Thr Thr Gly Trp Ser Val Phe  
 65 70 75 80  
 Val Ser Ser Lys Arg Leu Val Ala Gly Asp Ala Phe Ile Phe Leu Arg  
 85 90 95  
 Gly Glu Ser Gly Glu Leu Arg Val Gly Val Arg Arg Ala Met Arg Gln  
 100 105 110

<210> 1120  
 <211> 156  
 <212> PRT  
 <213> Pinus radiata

<400> 1120  
 Ala Leu Arg Glu Ala Ile Lys Asn Gly Ala Cys Pro Asn Cys Gly Gly  
 1 5 10 15  
 Ser Thr Ser Leu Gly Glu Met Pro Gly Phe Asp Glu His His Phe Arg  
 20 25 30  
 Ile Glu Asn Thr Arg Leu Lys Glu Glu Leu Asp Arg Val Ser Gly Ile  
 35 40 45  
 Ala Thr Lys Tyr Ile Gly Arg Ser Met Pro His Leu Ala Pro Ile Ala  
 50 55 60  
 Thr Pro Pro Met Leu Met Ser Ser Leu Glu Leu Ala Met Gly Ser Phe  
 65 70 75 80

Gly	Gly	Lys	Gln	Ser	Gln	Pro	Ala	Ala	Pro	Ser	Val	Asp	Phe	Ile	Ser
				85					90					95	
Gly	Pro	Leu	Ala	Asp	Gly	Pro	Ile	Ile	Asn	Cys	Gly	Thr	Leu	Thr	Asp
			100					105						110	
Leu	Asp	Lys	Pro	Leu	Ala	Leu	Glu	Leu	Ala	Met	Asn	Gly	Val	Glu	Glu
		115					120					125			
Leu	Ile	Arg	Met	Ala	Gln	Thr	Asp	Glu	Pro	Leu	Trp	Leu	Lys	Asp	Val
	130					135					140				
Asn	Ala	Gly	Ser	Val	Lys	Glu	Leu	Phe	Glu	Leu	Gly				
145					150						155				

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<210> 1121
<211> 116
<212> PRT
<213> Pinus radiata
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[illegible]

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<210> 1122
<211> 104
<212> PRT
<213> Pinus radiata
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	<400>	1122													
Phe 1	Leu	Phe	Asp	Ser 5	Leu	Asp	Ala	Val 10	Asn	Ile	Asn	Met	Glu	Ala	Val
His	Lys	Ile	Glu 20	Lys	Phe	Leu	Leu 25	Ala	Pro	Lys	Ile	Asp	Ala 30	Thr	Ile
Ser	Ser	Ala	Ala 35	Ala	Pro	Pro	Trp 40	Lys	Thr	Leu	Phe	Ala 45	Ala	Ala	Gly
Phe 50	Ser	Pro	Val	Ala	Phe	Ser 55	Asn	Phe	Thr	Glu	Thr 60	Gln	Ala	Glu	Tyr
Leu 65	Ile	Gln	Arg	Leu 70	His	Ser	Arg	Gly	Phe	Glu 75	Val	Glu	Lys	Ala	His 80
Ala	Ala	Leu	Leu	Leu 85	Gly	Trp	Gln	Gly	Arg 90	Pro	Leu	Val	Ser	Ala 95	Thr
Ala	Trp	Arg	Cys 100	Gly	Pro	Pro	Pro								

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<210> 1123
<211> 169
<212> PRT
<213> Pinus radiata
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<400> 1123

Glu Glu Lys Gln Leu Ser Ile Ser Gly Arg Asn Trp Gly Glu Val Asn  
 1 5 10 15  
 Leu Glu Gly Asn Met Leu Thr Phe Leu Val Gly Ser Lys Pro Ala Phe  
 20 25 30  
 Glu Val Ser Leu Ala Asp Val Ser Gln Thr Gln Leu Gln Gly Lys Asn  
 35 40 45  
 Asp Val Val Leu Glu Phe His Val Asp Asp Thr Thr Gly Ala Asn Glu  
 50 55 60  
 Lys Asp Ser Leu Met Glu Leu Ser Phe His Ile Pro Asn Ser Asn Thr  
 65 70 75 80  
 Thr Phe Ala Gly Asp Glu Ala Ser Pro Pro Ala Gln Ile Phe Arg Glu  
 85 90 95  
 Lys Ile Met Ser Met Ala Asp Val Gly Ser Ser Gly Gly Glu Ala Val  
 100 105 110  
 Ala Leu Phe Glu Asp Ile Ala Ile Leu Thr Pro Arg Gly Arg Tyr Thr  
 115 120 125  
 Ile Glu Leu His Leu Ser Phe Met Arg Leu Gln Gly Gln Ala Ser Asp  
 130 135 140  
 Phe Lys Ile Gln Tyr Ser Ser Val Leu Arg Leu Phe Val Leu Pro Lys  
 145 150 155 160  
 Ser Pro His Thr Leu Val Val Ile Thr  
 165

<210> 1124  
 <211> 124  
 <212> PRT  
 <213> Pinus radiata

<400> 1124  
 Leu Gly His Ser Gln Asn Phe Ser Thr Asp Val Asn Arg Met Pro Asp  
 1 5 10 15  
 Val Pro Pro Arg Arg Gly Gly His Arg Arg Ala Gln Ser Glu Ile Ala  
 20 25 30  
 Phe Arg Leu Pro Asp Asp Ile Met Phe Asp Gly Asp Leu Gly Phe Ala  
 35 40 45  
 Gly Phe Asp Met Pro Thr Val Ser Asp Asp Ala Thr Glu Ala Glu Asp  
 50 55 60  
 Leu Ile Ser Met Tyr Met Asp Met Glu Lys Leu Thr Ser Phe Gly Glu  
 65 70 75 80  
 Pro Leu Asn Ser Ala Ala Gly Glu Gly Ser Lys Leu Pro Ser Gly Ala  
 85 90 95  
 Glu Thr Asn Arg Pro Pro His His Ser Arg Ser Leu Ser Val Asp Ala  
 100 105 110  
 Val Phe Ser Gly Phe Glu Gly Asn Met Glu Asp Thr  
 115 120

<210> 1125  
 <211> 70  
 <212> PRT  
 <213> Pinus radiata

<400> 1125  
 Met Asp Arg Ser Ser Ser Glu Asp Ser Val Asp Ser Gln Gly Asp Val  
 1 5 10 15  
 Asn Ala Asn Tyr Lys Met Val Phe Ser Glu Asp Glu Lys Asp Leu Ile  
 20 25 30  
 Ser Arg Leu Tyr Asn Leu Leu Gly Gln Arg Trp Ala Leu Ile Ala Gly  
 35 40 45  
 Arg Ile Pro Gly Arg Thr Ala Glu Glu Ile Glu Lys Tyr Cys Ser Arg  
 50 55 60  
 Arg Tyr Ile Ser Glu Tyr

65

70

<210> 1126  
 <211> 120  
 <212> PRT  
 <213> Pinus radiata

<400> 1126  
 Gly Gly Glu Ile Arg Ile Leu Arg Gly Phe Phe Val Asn Gln Lys Thr  
 1 5 10 15  
 Asp Gly Gln Gly Ser Ser Phe Ala Ala Ser Ser Ser Arg Asn Ser Ser  
 20 25 30  
 Phe Ser Asn Gly Tyr Asp Asn Pro Gln Asn Thr Asn Lys Asn Ser Ser  
 35 40 45  
 Ser Gly Gly Thr Gly Asp Ala Gly Ser Phe Glu Cys Asn Ile Cys Leu  
 50 55 60  
 Glu Leu Ala Gln Asp Pro Ile Val Thr Leu Cys Gly His Leu Phe Cys  
 65 70 75 80  
 Trp Pro Cys Leu Tyr Lys Trp Leu His Gly His Ser Lys Ser Gln Glu  
 85 90 95  
 Cys Pro Val Cys Lys Ala Leu Val Glu Glu Asp Lys Ile Val Pro Leu  
 100 105 110  
 Tyr Gly Arg Gly Lys Val Gly Ser  
 115 120

<210> 1127  
 <211> 233  
 <212> PRT  
 <213> Pinus radiata

<400> 1127  
 Met Gly Ala Pro Lys Gln Lys Trp Thr Ser Glu Glu Glu Gly Ala Leu  
 1 5 10 15  
 Lys Ala Gly Val Glu Lys Tyr Gly Thr Gly Lys Trp Arg Thr Ile Gln  
 20 25 30  
 Lys Asp Pro Glu Phe Gly His Cys Leu Ala Ala Arg Ser Asn Val Asp  
 35 40 45  
 Leu Lys Asp Lys Trp Arg Asn Met Ser Val Ser Ala Ser Gly Gln Gly  
 50 55 60  
 Ser Arg Asp Lys Val Lys Thr Pro Arg Val Lys Ala Ile Ala Ser Leu  
 65 70 75 80  
 Pro Tyr Ser Ser Val Thr Ala Glu Ser Thr Ser Val Phe Ser Ile Glu  
 85 90 95  
 Ala Thr Thr Ser Thr Thr Pro Asp Asn Leu Ile Ser Pro Lys Ser Ser  
 100 105 110  
 Ser Asn Gly Lys Ile His Ser Pro Arg Tyr Asp Gly Met Ile Leu Glu  
 115 120 125  
 Ala Leu Thr Ser Met Gln Asp Pro Asn Gly Ile Asp Ile Ala Thr Ile  
 130 135 140  
 Ala Ser Phe Met Glu Glu Arg His Glu Leu Pro Pro Asn Phe Lys Arg  
 145 150 155 160  
 Ala Leu Gly Thr Lys Leu Arg Arg Leu Val Ala Gln Glu Lys Val Ile  
 165 170 175  
 Lys Ile Arg Asn Ser Tyr Lys Leu Lys Asp Met Thr Ser Thr Glu Val  
 180 185 190  
 Thr Ser Glu Val Leu Gly Ser Ala Ile Pro Ile Asp Asn Ser Met Gln  
 195 200 205  
 Tyr Ser Asn Ala Phe Thr Asn Thr Ile Asp Thr Phe Ser Val Asp Arg  
 210 215 220  
 Val Asn Glu Ala Ser Met Ala Ala Ala  
 225 230



<210> 1128  
 <211> 144  
 <212> PRT  
 <213> Pinus radiata

<400> 1128  
 His Ser Arg Pro Leu Ile Lys Glu Glu Ala Glu Ser Gly Asp Asn Ser  
 1 5 10 15  
 Ala Asn Ser Ala Asp Val Glu Thr Leu Leu Pro Gln Val Asp Glu Thr  
 20 25 30  
 Ala Ser Ala Asp Leu Thr Val Phe Pro Gly Phe Val Thr Pro Tyr Val  
 35 40 45  
 Pro Tyr Gly Phe Pro Ile Trp His Thr Phe Arg Pro Thr Ile Thr Gln  
 50 55 60  
 Thr Ser Asn Val Tyr Lys Pro Thr Ala Val Met Pro Thr Ala Pro Ile  
 65 70 75 80  
 Lys Met Asp Glu Cys Thr Gly Leu Ser Gln Leu Ser Leu Gly Gly Val  
 85 90 95  
 Ala Ala Ala Ser Ala Met Lys Pro Ser Glu Leu Ser Leu Lys Leu His  
 100 105 110  
 Gly Arg Pro Pro Ser Arg Gln Ser Ala Phe Gln Ala Lys Pro Ser Leu  
 115 120 125  
 Asn Glu Ser Ser Ser Leu Ser Ser Ser Ser Asn Val Ile Ser Val Val  
 130 135 140

<210> 1129  
 <211> 187  
 <212> PRT  
 <213> Pinus radiata

<400> 1129  
 His Pro Tyr Met Trp Gly Gly Gln Pro Leu Met Pro Pro Tyr Gly Thr  
 1 5 10 15  
 Pro Leu Pro Tyr Pro Ala Met Tyr Pro His Gly Gly Ile Tyr Ala His  
 20 25 30  
 Pro Ser Met Pro Pro Gly Ala Leu Pro Tyr Gly His Tyr Gly Met Pro  
 35 40 45  
 Ser Pro Gly Asn Ala Glu Val Thr Thr Thr Leu Ala Leu Pro Asn Ala  
 50 55 60  
 Glu Ala Glu Ala Lys Ser Ser Glu Gly Lys Glu Arg Asn Thr Met Lys  
 65 70 75 80  
 Arg Ser Lys Gly Ser Leu Gly Ser Leu Gly Met Ile Thr Gly Lys Gly  
 85 90 95  
 Gly Glu Gly Gly Lys Ala Thr Ser Gly Ser Ala Asn Glu Ala Met Ser  
 100 105 110  
 Gln Ser Gly Asp Ser Gly Ser Asp Gly Ser Ser Glu Gly Ser Glu Glu  
 115 120 125  
 Tyr Asn Thr Gln Thr Glu Ser Gln Val Ala Arg Lys Arg Ser Phe Asp  
 130 135 140  
 Gln Met Ile Val Asp Gly Ala Asn Ala Gln Ser Thr Asn Ile Gln Ser  
 145 150 155 160  
 Tyr Asn Ser Gln Ala Gly Glu Pro Tyr Val Thr Ser Gly Gly His Ala  
 165 170 175  
 Met Gly Asn Pro Ile Ser Gln Ala Val Ala Ala  
 180 185

<210> 1130  
 <211> 80  
 <212> PRT  
 <213> Pinus radiata

&lt;400&gt; 1130

Gly	Lys	Val	Thr	Ala	Ser	Gly	Lys	Val	Thr	Ser	Gly	Val	Asn	Asp	Leu
1				5					10					15	
Phe	Trp	Glu	Gln	Phe	Leu	Thr	Glu	Thr	Pro	Gly	Ser	Ala	Thr	Asp	Thr
			20					25					30		
Gln	Glu	Ala	Glu	Ser	Lys	Ile	Gln	Glu	Thr	Arg	Thr	Lys	Asp	Gln	Asp
		35					40					45			
Glu	Arg	Leu	Pro	Glu	Asn	Gly	Lys	Cys	Trp	Ser	Asn	Lys	Gln	Thr	Leu
	50				55						60				
Asp	Gln	Leu	Thr	Glu	Gln	Met	Gly	Gln	Leu	Ala	Ser	Gly	Thr	Gln	Thr
65					70					75					80

&lt;210&gt; 1131

&lt;211&gt; 96

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1131

Met	Asn	Met	Asp	Ser	Arg	Gln	Ser	Gly	Glu	Glu	Glu	Asp	Cys	Asn	Val
1				5					10					15	
Thr	Arg	Pro	Gly	Gly	Gly	Gly	Gly	Ile	Ser	Leu	His	Val	Ser	Ser	Val
			20					25					30		
Glu	Tyr	Cys	Gln	Lys	Ser	Ala	Cys	Val	Ala	His	Asp	Ile	Ser	Ser	Asp
		35					40					45			
Glu	Gln	Asp	Leu	Ile	Asn	Arg	Leu	His	Asn	Leu	Leu	Gly	Asp	Arg	Trp
	50				55					60					
Ala	Leu	Ile	Ala	Gly	Arg	Leu	Pro	Trp	Arg	Arg	Arg	Glu	Glu	Ile	Glu
65					70					75					80
Asn	Tyr	Cys	Lys	Met	Arg	Tyr	Thr	Ala	Thr	Thr	Ser	Ser	Ser	Arg	Ser
				85					90					95	

&lt;210&gt; 1132

&lt;211&gt; 193

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1132

Glu	Arg	Glu	Arg	Gly	Arg	Lys	Pro	Ala	Asn	Gly	Arg	Glu	Glu	Pro	Leu
1				5					10					15	
Asn	His	Val	Glu	Ala	Glu	Arg	Gln	Arg	Arg	Glu	Lys	Leu	Asn	Gln	Lys
			20					25					30		
Phe	Tyr	Glu	Leu	Arg	Ala	Val	Val	Pro	Asn	Val	Ser	Lys	Met	Asp	Lys
		35					40					45			
Ala	Ser	Leu	Leu	Gly	Asp	Ala	Ala	Ala	Tyr	Ile	Lys	Asp	Leu	Phe	Ser
	50				55					60					
Lys	Gln	Gln	Asp	Leu	Glu	Ser	Glu	Arg	Val	Asp	Met	Gln	Val	Gln	Ile
65					70					75					80
Asp	Thr	Ile	Lys	Lys	Glu	Leu	Leu	Met	Asn	Ser	Leu	Lys	Leu	Ala	Ala
				85					90					95	
Lys	Glu	Ala	Lys	Asp	Leu	Ser	Ser	Ile	Asp	Leu	Lys	Gly	Phe	Ser	Gln
			100					105					110		
Gly	Lys	Phe	Pro	Gly	Leu	Asn	Ser	Glu	Val	Arg	Ile	Val	Gly	Arg	Glu
		115					120					125			
Ala	Ile	Ile	Arg	Ile	Gln	Cys	Thr	Lys	His	Asn	His	Pro	Val	Ala	Arg
	130				135					140					
Leu	Met	Ile	Ala	Leu	Gln	Glu	Leu	Asp	Leu	Glu	Val	Leu	His	Ala	Ser
145					150					155					160
Ile	Ser	Thr	Val	Lys	Asp	Ser	Leu	Ile	Ile	Gln	Thr	Val	Ile	Val	Lys
				165					170					175	
Met	Thr	Arg	Gly	Leu	Tyr	Thr	Glu	Asp	Gln	Leu	His	Ala	Leu	Leu	Cys

180 185 190

Lys

<210> 1133  
 <211> 88  
 <212> PRT  
 <213> Pinus radiata

<400> 1133

Met	Ala	Tyr	Asn	Arg	Lys	His	Ala	Ala	Ala	Ala	Thr	Ser	Pro	Asp	Ser
1				5					10					15	
Ser	Leu	Gly	Ser	Asp	Asn	Glu	Ser	Gly	Gly	Gly	Gly	Gly	Gly	Gly	Gly
			20					25					30		
Gly	Lys	Gly	Gln	Ser	Thr	Lys	Asn	Gly	Asn	Gly	Asn	Tyr	Ile	Arg	Glu
		35					40					45			
Gln	Asp	Arg	Leu	Leu	Pro	Ile	Ala	Asn	Val	Gly	Arg	Ile	Met	Lys	Arg
		50				55					60				
Ala	Leu	Pro	Gly	Asn	Ala	Lys	Ile	Ser	Lys	Asp	Ala	Lys	Glu	Thr	Val
65				70						75					80
Gln	Glu	Cys	Val	Ser	Glu	Phe	Ile								
					85										

<210> 1134  
 <211> 141  
 <212> PRT  
 <213> Pinus radiata

<400> 1134

Met	Ala	Thr	Arg	Asn	Pro	Phe	Asp	Leu	Leu	Glu	Asp	Asp	Asp	Asn	Gly
1				5					10					15	
Asp	Pro	Ser	Ser	Leu	Leu	Asp	Thr	Leu	Ala	Ala	Ala	Lys	Asp	Lys	Pro
			20					25					30		
Ala	Ala	Val	Ala	Ala	Lys	Lys	Gln	Gln	Pro	Ala	Val	Ser	Ala	Ser	Gly
		35					40					45			
Lys	Leu	Pro	Thr	Lys	Pro	Leu	Pro	Pro	Ala	Gln	Ala	Val	Lys	Glu	Ser
	50					55					60				
Arg	Val	Ser	Pro	Asn	Glu	Gly	Gly	Arg	Gly	Arg	Gly	Gly	Gly	Arg	Gly
65				70						75					80
Gly	Arg	Gly	Phe	Gly	Asn	Arg	Glu	Ser	Gln	Glu	Phe	Gly	Arg	Gly	Arg
				85					90				95		
Gly	Gly	Gly	Tyr	Asn	Val	Glu	Arg	Asn	Phe	Asn	Arg	Glu	Asn	Asn	Ala
			100					105					110		
Tyr	Ser	Gly	Ser	Arg	Val	Gly	Phe	Tyr	Asp	Asn	Asn	Ser	Asp	Leu	Ile
		115				120						125			
Pro	Ser	Arg	Asn	Glu	Asp	Gly	Asp	Gly	Ala	Ser	Asn	Asp			
		130				135						140			

<210> 1135  
 <211> 43  
 <212> PRT  
 <213> Pinus radiata

<400> 1135

Met	Pro	Arg	Val	Lys	Leu	Ile	Ser	Arg	Asn	Phe	Met	Asp	Met	Val	Ala
1				5					10					15	
Ala	Leu	Pro	Ala	Ala	Lys	Leu	Asp	Arg	Leu	Tyr	Asp	Lys	Ser	Leu	His
			20					25					30		
Leu	Arg	Ser	Gly	Leu	Arg	Ser	Leu	Thr	Pro	Val					
		35					40								

<210> 1136  
 <211> 48  
 <212> PRT  
 <213> Pinus radiata

<400> 1136  
 Met Ala Glu Glu Met Asp Thr Pro Thr Lys Thr Thr Lys Thr Pro Thr  
 1 5 10 15  
 Ser Gln Glu Gln Thr Ser Thr Ser Thr Pro Val Ala Tyr Pro Glu Trp  
 20 25 30  
 Ala Ala Pro Ile Gln Ala Leu Tyr Asn Ser Gly Lys Thr Pro Leu Pro  
 35 40 45

<210> 1137  
 <211> 190  
 <212> PRT  
 <213> Pinus radiata

<400> 1137  
 Ser Phe Ser Ser Thr Arg Glu Ser Met Glu Arg Arg Asp Gln Ser Pro  
 1 5 10 15  
 Val Ala Ala Arg His Pro Met Arg Lys His Tyr Arg Gly Val Arg Gln  
 20 25 30  
 Arg Gln Trp Gly Lys Trp Val Ala Glu Ile Arg Leu Pro Gln Asn Arg  
 35 40 45  
 Thr Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala Glu Ala Ala Ala Leu  
 50 55 60  
 Ala Tyr Asp Arg Ala Ala Tyr Arg Trp Arg Gly Glu Cys Ala Arg Leu  
 65 70 75 80  
 Asn Phe Pro His Leu Phe Ser Lys Lys Tyr Gln Asn Ser Ser Pro Ser  
 85 90 95  
 Ser Thr Asn Gly Arg Ile Pro Arg Leu Ser Cys Glu Lys Ser Asp Gln  
 100 105 110  
 Lys Tyr Ala Tyr Asn Gly Asp Pro Val His Thr Asn Val Tyr Lys Gly  
 115 120 125  
 Pro Pro Ile Arg Ile Thr Ala Tyr Asn Gly Asp Pro Val Pro Ile Asp  
 130 135 140  
 Val Tyr Arg Ser Asp Pro Val Arg Val Ser Ala Tyr Thr Gly Asp Pro  
 145 150 155 160  
 Val Arg Ile Ser Ala Tyr Ser Gly Asp Pro Val Gly Asn Thr Val Thr  
 165 170 175  
 Leu Ala Glu Ser Glu Leu Glu Ser Ser Cys Ser His Glu Ser  
 180 185 190

<210> 1138  
 <211> 177  
 <212> PRT  
 <213> Pinus radiata

<400> 1138  
 Leu Asp Tyr Met Glu Glu Gln Asn Trp Asp Ile Asn Gly Ala Lys Tyr  
 1 5 10 15  
 Asp Gly Ser Glu Lys Trp Lys Ala His Ser Ser Glu Gln Lys Asp Leu  
 20 25 30  
 Gly Thr Ile Pro Thr Lys Val Glu Gly Arg Ile Gly Asn Arg Glu Asn  
 35 40 45  
 Ser Leu Asp Val Thr Arg Gly Gly Ala Leu Trp Asp Ile Phe Arg Arg  
 50 55 60  
 Glu Asp Ile Pro Lys Leu Gln Asp Tyr Leu Leu Lys His Cys Gln Asp  
 65 70 75 80  
 Phe Arg His Ser Arg Asn Val Ser Val Asp Ser Val Val His Pro Ile

85 90 95  
 His Asp Gln Thr Phe Tyr Leu Asn Glu Gly His Lys Lys Lys Leu Lys  
 100 105 110  
 Glu Glu Tyr Gln Val Glu Pro Trp Thr Phe Glu Gln His Leu Gly Glu  
 115 120 125  
 Ala Val Phe Ile Pro Ala Gly Cys Pro His Gln Val Arg Asn Leu Lys  
 130 135 140  
 Ser Cys Ile Lys Val Ala Leu Asn Phe Val Ser Pro Glu Asn Leu Gln  
 145 150 155 160  
 Glu Cys Ile Arg Leu Glu Asp Glu Leu Arg Leu Leu Pro Lys Asn His  
 165 170 175  
 Arg

<210> 1139  
 <211> 148  
 <212> PRT  
 <213> Pinus radiata

<400> 1139  
 Gly Pro Arg Glu Met Thr Glu Glu Glu Arg Glu Thr Lys Lys Ala Ala  
 1 5 10 15  
 Ser Val Ala Ala Thr Ala Ala Asp Gln Glu Leu Arg Lys Lys Val Leu  
 20 25 30  
 Arg Asp Leu His Ala Leu Ile Asn Pro Asn Ala Thr Gly Glu Ala Asp  
 35 40 45  
 Pro Ala Glu Phe Pro Gly Asp Asp Ala Thr Val Asp Gly Glu Val Thr  
 50 55 60  
 Asp Ala Glu Trp Phe Tyr Leu Val Ser Met Met Lys Ser Phe Gly Asn  
 65 70 75 80  
 Gly Leu Gly Val Pro Gly Gln Ala Phe Cys Gly Gly Met Pro Ile Trp  
 85 90 95  
 Ile Ile Gly Ser Glu Lys Leu Gln Ser Tyr Asn Cys Glu Arg Ala Arg  
 100 105 110  
 Gln Ala Gln Gln Phe Gly Ile Gln Thr Met Val Cys Ile Pro Thr Pro  
 115 120 125  
 Asn Gly Val Val Glu Leu Gly Ser Thr Asp Leu Asn Pro Gln Asn Trp  
 130 135 140  
 Asp Leu Ile Gln  
 145

<210> 1140  
 <211> 341  
 <212> PRT  
 <213> Pinus radiata

<400> 1140  
 Met Cys Gly Gly Ala Ile Ile Lys Glu Phe Ile Pro Ala Asn Arg Ser  
 1 5 10 15  
 Arg Arg Val Thr Ala Arg Glu Leu Trp Pro Asp Phe Asp Thr Phe Ala  
 20 25 30  
 Glu Phe Ile Asn Gly Gly Ala Thr Gln Glu Thr Phe Asn Lys Pro Gly  
 35 40 45  
 Lys Leu Asp Glu Gly Cys Lys Gln Lys Ser Lys Pro Ser Lys Gly Ser  
 50 55 60  
 Val Lys Thr Gln Gln Glu Phe Cys Ser Gly Phe Glu Gly Gly Arg Ser  
 65 70 75 80  
 Glu Val Ile Pro Pro Leu Glu Asp Val Glu Gly Ser Thr Pro Thr Ile  
 85 90 95  
 Gly Gly Arg Lys Arg Lys Asn Val Tyr Arg Gly Ile Arg Gln Arg Pro  
 100 105 110

Trp Gly Lys Trp Ala Ala Glu Ile Arg Asp Pro Ser Lys Gly Val Arg  
 115 120 125  
 Val Trp Leu Gly Thr Phe Asn Thr Ala Glu Glu Ala Ala Lys Ala Tyr  
 130 135 140  
 Asp Ala Ala Ala Lys Arg Ile Arg Gly Lys Lys Ala Lys Leu Asn Phe  
 145 150 155 160  
 Ala Asp Asn Ser Cys Ser Val Lys Asn Asp Thr Ser Lys Lys Leu Ser  
 165 170 175  
 Gly Lys Lys Gly Lys Leu Cys Ser Lys His Pro Ala Leu Leu Leu Glu  
 180 185 190  
 Gly Phe Asn Ala Ser Cys Lys Val Lys Pro Ser Tyr Ser Ala Asn Pro  
 195 200 205  
 Asp Leu Leu Gly Gly Tyr Asn Ile Asn Arg Lys Val Lys Ala Ser Leu  
 210 215 220  
 Ser Gly Val Gly Lys Ser Asp Leu Thr Ile Cys Gly Tyr Asp Asp Met  
 225 230 235 240  
 Glu Tyr Gly Asp Ser Gly Phe Ser Lys Pro Ser Ala Pro Phe Gln Asn  
 245 250 255  
 Asn Ser Asn Ala Cys Thr Val Gln Phe Ser Glu His Ser Asn Leu Thr  
 260 265 270  
 Gln Thr Ser Gln Lys Ser Cys Ser Cys Glu Ile Cys Ser His Asn Tyr  
 275 280 285  
 Ser Glu Met Ser Asn Val Met Pro Pro Ala Tyr Gly Asn Ala Val Asn  
 290 295 300  
 Phe Glu Pro Val Gln Thr Ser Asn Pro Gly Gly Tyr Phe Asp Ser Asp  
 305 310 315 320  
 His Ser Ser Met Ser Phe Glu Gly Ala His Phe Pro Trp Ala Gln Glu  
 325 330 335  
 Ile Lys Thr Pro Glu  
 340

&lt;210&gt; 1141

&lt;211&gt; 181

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1141

Ala Lys Thr Leu His Pro Cys Trp Asp Ala Tyr Gln Leu Glu Asp Glu  
 1 5 10 15  
 Arg Ala Ser Ala Val Tyr Ile Asn Val Phe Ser Gly Asp Ala Thr Thr  
 20 25 30  
 Glu Phe Pro Ser Ala Leu Gln Leu Gly Arg Gly Gly Ile Leu Ala Asp  
 35 40 45  
 Ala Met Gly Leu Gly Lys Thr Val Met Thr Ile Ser Leu Leu Leu Ala  
 50 55 60  
 Asn Ser Gly Lys Gly Gly Phe Ser Gly Met Asp Thr Val Glu Pro Phe  
 65 70 75 80  
 Ser Ala Asn Ser Cys Ser Glu Lys Thr Ile Ile His Pro Tyr Asn Ile  
 85 90 95  
 Gly Val Glu Leu Gly Pro Ser Gln Tyr Thr Asn Lys Thr Gln Gly Thr  
 100 105 110  
 Ser Met Leu Arg Arg Ser Ser Ser Gly Leu His Lys Gly Gly Gly Asn  
 115 120 125  
 Leu Ile Val Cys Pro Met Thr Leu Leu Ser Gln Trp Lys Thr Glu Leu  
 130 135 140  
 Glu Thr His Val Gln Ser Gly Thr Met Ser Val Tyr Val His Tyr Gly  
 145 150 155 160  
 Gln Ser Arg Thr Lys Asp Val Lys Ser Leu Leu Gln His Asp Val Val  
 165 170 175  
 Leu Thr Thr Tyr Gly  
 180

<210> 1142  
 <211> 59  
 <212> PRT  
 <213> Pinus radiata

<400> 1142  
 Met Phe Val Gly Met Met Ser Glu Val Gly Ser Pro Thr Ser Gln Asp  
 1 5 10 15  
 Ser Arg Asn Ser Glu Asp Gly Glu Arg Glu Asn Cys Ala Val Arg Glu  
 20 25 30  
 Gln Asp Arg Phe Met Pro Ile Ala Asn Val Ile Arg Ile Met Arg Lys  
 35 40 45  
 Val Leu Pro Thr His Ala Lys Ile Ser Asp Asp  
 50 55

<210> 1143  
 <211> 133  
 <212> PRT  
 <213> Pinus radiata

<400> 1143  
 Met Gly Phe Glu Gln Thr Arg Gly Gly Gly Gly Gly Ala Lys Met Thr  
 1 5 10 15  
 Gln His Gln Val Val Thr Thr Glu Leu Val Arg Gln Ala Thr Glu Arg  
 20 25 30  
 Leu Arg Lys Leu Cys Arg Thr Gly Val Lys Val Glu Leu Arg Asp Phe  
 35 40 45  
 Phe Gln Leu Cys Ile Val Leu Ala Lys Ser Ile Asp Ser Ala Val Val  
 50 55 60  
 Tyr Asn Gln Ile Pro Thr Met Val His Glu Leu Pro Gln Leu Val Arg  
 65 70 75 80  
 Gln Val Phe Glu Arg Lys Asp Asp Ile Arg Leu Gln Pro Ala Ile Met  
 85 90 95  
 Val Leu Met Leu Ser Val Lys Asn Ala Cys Arg Ser Gly Trp Phe Arg  
 100 105 110  
 Val Thr Asp Thr Asp Glu Leu Leu Thr Met Ser Lys Glu Leu Ser Ser  
 115 120 125  
 Arg Phe Thr Ser Thr  
 130

<210> 1144  
 <211> 169  
 <212> PRT  
 <213> Pinus radiata

<400> 1144  
 Met Thr Arg Lys Cys Ser His Cys Gly Asn Asn Gly His Asn Ser Arg  
 1 5 10 15  
 Thr Cys Pro Asn Arg Gly Gly Val Lys Leu Phe Gly Val Arg Leu Thr  
 20 25 30  
 Asp Gly Pro Ile Arg Lys Ser Ala Ser Met Gly Asn Leu Met Met Met  
 35 40 45  
 Ser Asn Pro Ser Ser Pro Ala Asp Pro Ser Glu Pro Ala Ser Ala Ala  
 50 55 60  
 Ala Ala Ala Ala Ala Ala Ala Ser Gly Tyr Leu Ser Asp Gly Leu  
 65 70 75 80  
 Val Glu Ala Ser Thr Ser Ser Asn Ser Arg Glu Arg Lys Lys Gly Val  
 85 90 95  
 Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Leu Gly Leu Gln Lys  
 100 105 110

Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asn Phe Val Ile Thr  
 115 120 125  
 Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Phe Ile Arg  
 130 135 140  
 Gln Ser Asn Met Thr Arg Lys Lys Arg Arg Ser Ser Leu Phe Asp Met  
 145 150 155 160  
 Thr Pro Val Ser Phe Phe Phe Leu Ser  
 165

<210> 1145  
 <211> 103  
 <212> PRT  
 <213> Pinus radiata

<400> 1145  
 Val Ser Ser Arg His Glu Phe Ala Val Ser Gln Met Ala Tyr Leu Gln  
 1 5 10 15  
 Ala Leu Arg Asn Ala Gly Ala Thr Leu Arg Gln Phe Ala Glu Leu Glu  
 20 25 30  
 Ser Met Glu Leu Gln Lys Thr Ser Pro Tyr Pro His Leu Arg His Tyr  
 35 40 45  
 Arg Val Thr Leu Pro Pro Ser Pro Pro Pro Leu Pro Pro Pro Pro  
 50 55 60  
 Pro Pro Pro Pro Leu Ser Leu Thr Pro Ser Pro Ser Tyr Gly Ser Ala  
 65 70 75 80  
 Thr Phe Pro Ser Ser Ile Pro Val Asn Arg Ser Ile Tyr Arg Cys Pro  
 85 90 95  
 Tyr Gln Gln Cys Ser Pro Ser  
 100

<210> 1146  
 <211> 153  
 <212> PRT  
 <213> Pinus radiata

<400> 1146  
 Gln Leu Pro Asp Glu Ala Ile Ala Leu Ala Ala Ala Ser His Ile Glu  
 1 5 10 15  
 Arg Glu Leu Gln Ile Thr Ser Trp Asn Leu Ser Cys Asn Phe Val Ala  
 20 25 30  
 Ser Thr Leu Gln Gly Arg Glu Cys Ile Glu Arg Leu Glu Ile Thr Gly  
 35 40 45  
 Ile Gly Asp Pro Ser Gly Arg Gly Leu Gly Phe Ser Tyr Leu Arg Val  
 50 55 60  
 Ala Pro Lys Pro Pro Ile Ser Ser Ala Leu Val Lys Lys Lys Ala Ala  
 65 70 75 80  
 Ala Ala Arg Gly Gly Ser Ala Val Thr Gly Thr Asp Ala Asp Leu Arg  
 85 90 95  
 Arg Leu Ser Met Asp Ala Ala Arg Glu Val Leu Leu Lys Phe Asn Val  
 100 105 110  
 Asp Glu Glu Gln Ile Glu Lys Met Thr Arg Trp His Arg Ile Ala Met  
 115 120 125  
 Val Arg Lys Leu Ser Ser Glu Gln Ala Ala Ser Gly Val Lys Val Asp  
 130 135 140  
 Ala Thr Ala Leu Asn Lys Phe Ala Arg  
 145 150

<210> 1147  
 <211> 73  
 <212> PRT  
 <213> Pinus radiata



&lt;400&gt; 1147

```

Met Lys Ser Pro Ser Thr Ser Cys Leu Ser His Pro Val Glu Gly Glu
 1           5           10           15
Gln Lys Ser Ile Asn Ser Glu Leu Trp His Ala Cys Ala Gly Pro Leu
           20           25           30
Val Ser Leu Pro Ser Val Gly Ser Val Val Tyr Tyr Phe Pro Gln Gly
           35           40           45
His Ser Glu Gln Val Ala Ala Ser Thr Gln Lys Val Ala Asp Thr His
           50           55           60
Ile Pro Asn Tyr Pro Asn Leu Pro Tyr
65           70

```

&lt;210&gt; 1148

&lt;211&gt; 213

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1148

```

Leu Lys Val Gln Trp Asp Glu Ile Ser Ala Ile Ala Arg Pro Glu Arg
 1           5           10           15
Val Ser Pro Trp Lys Leu Glu Pro Ser Leu Thr Pro Val Ala Val Asn
           20           25           30
Pro Leu Pro Val Ala Arg Gly Lys Arg Pro Arg Pro Asn Ile Leu Pro
           35           40           45
Ser Ser Ser Asp Leu Ser Val His Asp Lys Ala Pro Val Asp Ser Thr
           50           55           60
Gln Val His Arg Phe Pro Arg Val Leu Gln Gly Gln Glu Val Met Thr
65           70           75           80
Leu Gly Gly Ser Leu Gly Asp Gly Glu Leu Glu Ser Gly Gln Lys Met
           85           90           95
Val Ala Trp Gly Gly Ser Lys Leu Asp Asp Val Lys Ala Glu Gly Met
           100          105          110
Gly Cys Gln Arg Arg Leu Val Ser Glu Asn Trp Met Pro Pro Leu Arg
           115          120          125
His Asp Ser Leu Tyr Ser Asp Thr Phe Ser Ser Phe Gln Pro Val Gly
           130          135          140
Glu Val Gln Glu Phe Arg Gly Ser Leu Thr Asn Ser Ile Leu Glu Asp
145           150          155          160
Gly Gln Gln Pro Lys Leu Ser Arg Lys Gln Phe Gln Asp Gln Glu Gly
           165          170          175
Lys Ile Val Asp Gly Ser Gly Leu Trp Ser Met Ser Phe Pro Asn Ser
           180          185          190
Leu Gln Leu Cys Glu Ser Asn Arg Lys Met Ser Ala Thr Ser Ala Ala
           195          200          205
Gln Ser His Lys Gln
210

```

&lt;210&gt; 1149

&lt;211&gt; 217

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1149

```

Glu Leu Thr Ser Asp Ser His Arg Gln Ala Thr Leu Gln Leu Glu Ala
 1           5           10           15
Glu Val Thr Ala Trp His Ile Ser Phe Cys Ser Leu Ile Lys Ser Gln
           20           25           30
Gln Asp Tyr Ile Cys Ala Leu Tyr Glu Trp Ala Arg Leu Ser Leu Val
           35           40           45
Gln Leu Gly Asn Glu Ala Gln Trp Glu Arg Gly Asn Arg Pro Pro Ile

```

```

      50              55              60
Tyr Thr Leu Cys Asp Val Trp Gln Gln Val Leu Lys Arg Leu Pro Asp
65              70              75              80
Lys Val Ala Ser Glu Ser Ile Lys Ser Phe Ile Ser Val Val His Ala
      85              90              95
Ile Val Met Gln Gln Ala Asp Glu Gln Lys Arg Lys Lys Lys Ala Glu
      100              105              110
Asn Ile Ser Arg Glu Leu Gln Lys Lys Met Ile Ala Leu Arg Asn Ile
      115              120              125
Glu Lys Lys Tyr Tyr Ser Ser Tyr Ser Ile Pro Ala Arg Ala Asp Ala
      130              135              140
Thr Thr Glu Ser Gln Phe Glu Leu Gly His Thr Asp Pro Leu Ala Glu
      145              150              155              160
Lys Arg Ala Glu Ile Glu Ile Tyr Lys Arg Arg Leu Glu Asp Glu Lys
      165              170              175
Ala Asn Tyr Ser Lys Ser Ala Arg Gly Thr Arg Glu Met Thr Leu Asn
      180              185              190
Asn Ile Gln Thr Gly Leu Pro Gly Leu Phe Gln Ala Leu Ser Ser Phe
      195              200              205
Ser Ser Val Cys Ala Ser Ser Phe Glu
      210              215

```

```

<210> 1150
<211> 33
<212> PRT
<213> Pinus radiata

```

```

      <400> 1150
Met Ala Met Gly Glu Ala Glu Arg Ile Thr Gly Pro Trp Ser Pro Glu
      1              5              10              15
Glu Asp Thr Ser Leu His Lys Leu Val Glu Lys Ser Gly Pro Arg Asn
      20              25              30
Trp

```

```

<210> 1151
<211> 127
<212> PRT
<213> Pinus radiata

```

```

      <400> 1151
Trp Arg Pro Ala Lys Phe Ala Arg Asn Leu Leu Pro Asn Tyr Phe Lys
      1              5              10              15
Pro Asn Asn Phe Ser Ser Phe Gly Arg Gln Leu Asn Thr Tyr Gly Phe
      20              25              30
Arg Lys Ile Val Pro Asp Arg Trp Glu Phe Ser Asn Glu Phe Phe Arg
      35              40              45
Lys Gly Glu Lys Gln Leu Leu Ser Glu Ile His Arg Arg Lys Gly Leu
      50              55              60
Ile Gln Pro Pro Pro Pro Pro Glu Asn Arg Ser Ile Ser Pro Ser Asn
      65              70              75              80
Ser Gly Asp Glu Gln Thr Trp Ser Ser Thr Ser Ser Pro Asn Ser Ser
      85              90              95
Thr Gly Val Asp Ala Leu Ser His Lys Asn Ala Ile Glu Glu Asn Glu
      100              105              110
Lys Leu Arg Lys Glu Asn Leu Leu Val Ser Glu Leu Thr Gln
      115              120              125

```

```

<210> 1152
<211> 104
<212> PRT

```

&lt;213&gt; Pinus radiata

&lt;400&gt; 1152

```

Pro His Gly Leu Gln His His Ser Ser Asp Asp Ala Asn Gly Asp Gly
 1          5          10          15
Asp Lys Arg Ile Gly Val Glu Thr Gly Ser Ser Val Cys Pro Glu Leu
          20          25          30
Trp His Ala Cys Ala Gly Pro Leu Ile Ser Leu Pro Pro Lys Gly Ser
          35          40          45
Arg Val Val Tyr Phe Pro Gln Gly His Leu Glu Gln Ile Ala Asp Asn
          50          55          60
Glu Leu His Arg Gly Gly Arg Gly Ser Phe Leu Asn Ile Asn His Ala
65          70          75          80
Ala Ala Pro Met Ala Glu Glu Ala Ser Ser Ala Ala Ala Leu Asn Ile
          85          90          95
Pro Pro Ser Phe Ile Ser Gln Pro
          100

```

&lt;210&gt; 1153

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1153

```

Glu Thr Leu Thr Leu Leu Lys Ile Arg Ser Glu Met Asp Ser Lys Phe
 1          5          10          15
Arg Glu Ala Thr His Lys Gly Pro Leu Trp Asp Glu Val Ser Arg Ala
          20          25          30
Leu Ala Glu His Gly Tyr Gln Arg Ser Ser Lys Lys Cys Arg Glu Lys
          35          40          45
Phe Glu Asn Leu Tyr Lys Tyr Tyr Lys Lys Thr Lys Glu Gly Lys Ala
50          55          60
Gly Arg Gln Asp Gly Lys His Tyr Arg Phe Phe Ser Gln Leu Glu Ala
65          70          75          80
Leu Tyr Gly Gly Thr Thr Ile Asp Ala Ala Asp Ser Cys Phe Gly Val
          85          90          95
Thr Thr Arg Thr Asn Leu Thr Glu Ser Pro Gly Leu Asp Phe Asn Gly
          100          105          110
Asp Gly Ala Ser Gln Lys Tyr Ala Asp Thr His His Asn Ser Glu Gly
          115          120          125
Phe Ser Leu Ser Ser Asp Ser Ser Ser Asp Asp Glu Tyr Ser His Asp
          130          135          140
Ile Gln
145

```

&lt;210&gt; 1154

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1154

```

Ile Phe Tyr Arg Leu His Cys Asn Leu Gly Glu Lys Ser Asn Lys Ile
 1          5          10          15
Tyr Ile Cys Leu Phe Thr Met Glu Leu Ala Asp Glu His Ser Ile Leu
          20          25          30
Arg Tyr Lys Lys Pro Lys Leu Ser Lys Asn Val Val Ser Glu Arg Arg
          35          40          45
Arg Arg Gln Lys Met Asn Lys Leu Leu Tyr Thr Leu Arg Ala Leu Val
50          55          60
Pro Asn Ile Ser Lys Met Asp Lys Ala Ser Ile Leu Ala Asp Ala Ile
65          70          75          80

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Glu Tyr Val Glu Lys Leu Lys Gln Gln Val Glu Arg Ala Glu Ser Asp  
                   85                  90                  95  
 Val Gln Ser Thr Asn Val Ser Ala Leu  
                   100                  105

<210> 1155  
 <211> 83  
 <212> PRT  
 <213> Pinus radiata

<400> 1155  
 Arg Glu Phe Asn Ile Asn Ala Asp Val Tyr Ala Gln Asp Ser Ile Glu  
   1                  5                  10                  15  
 Leu Leu Lys Gln Ser Gly Ile Asp Phe Glu Lys Asn Glu Glu Lys Gly  
                   20                  25                  30  
 Ile Asp Ser His Arg Phe Gly Glu Leu Leu Met Ser Ser Gly Val Val  
                   35                  40                  45  
 Leu Asn Glu Asn Val Asn Trp Ile Thr Phe His Ser Gly Tyr Asp Phe  
                   50                  55                  60  
 Gly Tyr Leu Leu Lys Leu Leu Thr Cys Gln Asn Leu Pro Pro Glu Glu  
   65                  70                  75                  80  
 Ser Asp Phe

<210> 1156  
 <211> 170  
 <212> PRT  
 <213> Pinus radiata

<400> 1156  
 Met Ala Asn Arg Ser Leu Trp Gly Gly Ser Asp Phe Asp Tyr Glu Asn  
   1                  5                  10                  15  
 Glu Ala Asp Thr Arg Lys Gly Pro Trp Thr Val Glu Glu Asp Met Gln  
                   20                  25                  30  
 Leu Gly Ile Val Asn Leu His Gly Glu Gly Arg Trp Asn Phe Leu Ala  
                   35                  40                  45  
 Arg Ala Ser Gly Leu Gln Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp  
                   50                  55                  60  
 Val Asn Tyr Leu Arg Pro Asp Leu Lys Arg Ser Lys Ile Thr Pro Glu  
   65                  70                  75                  80  
 Glu Glu Arg Leu Ile Ile Glu Leu His Arg Arg Trp Gly Asn Arg Trp  
                   85                  90                  95  
 Ser Arg Ile Ala Gln Ser Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys  
                   100                  105                  110  
 Asn Phe Trp Arg Thr Arg Met Lys Gly Lys Leu Asn Ser Glu Thr Gln  
                   115                  120                  125  
 Lys Asp Ile Ala Gly Val Asp Ala Asp Asp Gly Val Gln Phe Glu Ser  
                   130                  135                  140  
 Glu Leu Gly Ser Cys Arg Leu Pro Val Ile Ser Ser His Ala Leu Pro  
   145                  150                  155                  160  
 Glu Val Asp Val Ala Glu Pro Ser Ser Thr  
                   165                  170

<210> 1157  
 <211> 119  
 <212> PRT  
 <213> Pinus radiata

<400> 1157  
 Gly Thr Val Gly Arg Lys Arg Arg Arg Ile His Arg Ser Ser Ile Gly  
   1                  5                  10                  15

Val Thr Gly Gly Arg Gly Leu Arg His Phe Ser Met Lys Val Cys Lys  
 20 25 30  
 Lys Val Glu Ser Lys Gly Trp Thr Thr Tyr Asn Glu Val Ala Ser Glu  
 35 40 45  
 Leu Val Ala Glu Phe Val Asn Pro Asn Ser Thr His Leu Ser Gln Asp  
 50 55 60  
 Gln Gln Gln Phe Asp Glu Lys Asn Ile Arg Arg Arg Val Tyr Asp Ala  
 65 70 75 80  
 Leu Asn Val Leu Met Ala Met Asp Ile Ile Ser Lys Glu Lys Lys Glu  
 85 90 95  
 Ile Arg Trp Lys Gly Leu Pro Thr Thr Asn Leu Ser Asp Ile Glu Arg  
 100 105 110  
 Leu Lys Thr Glu Arg Lys Arg  
 115

<210> 1158  
 <211> 97  
 <212> PRT  
 <213> Pinus radiata

<400> 1158  
 Cys Pro Arg Ala Phe Ala Arg Ala Tyr Asn Leu Lys Thr His Met Ala  
 1 5 10 15  
 Thr His Asp Pro Asn Arg Leu Lys Pro His Val Cys Pro His Arg Ser  
 20 25 30  
 Cys Ala Arg Ser Phe Ser Arg Lys His Asp Leu Gly Arg His Leu Val  
 35 40 45  
 Ser Ile His Arg Asp Asp Ser Val Val Ser Thr Pro Ser Ala Ser Met  
 50 55 60  
 Lys Ser Ile Gly Val Asp Ser Gly Arg Arg Ser Trp Cys Asp Asn Cys  
 65 70 75 80  
 Gly Lys Gly Thr Ile Gly Ala Ser Cys Gln Cys Ser Cys Ala Asp Ile  
 85 90 95  
 Lys

<210> 1159  
 <211> 162  
 <212> PRT  
 <213> Pinus radiata

<400> 1159  
 His Ala Pro Ile Phe Cys Arg Val Ala Arg Asn Phe Gln Leu Arg Val  
 1 5 10 15  
 Ile Leu Lys Glu Asn Arg Arg Arg Glu Thr Phe Asp Gly Phe Leu Arg  
 20 25 30  
 Glu Asp His Glu Lys Val Ser Gln Leu Val Thr Gln His Tyr Lys Val  
 35 40 45  
 Gln Leu Glu Thr Lys Glu Ile Ser Val Lys Gly Trp Asn Trp Gly Ser  
 50 55 60  
 Thr Asp Val Gln Gly Asn Asp Leu Ala Phe Val Val Ala Asn Arg Thr  
 65 70 75 80  
 Ala Phe Glu Val Pro Leu Arg Ser Ile Thr Asn Ser Asn Ile Ala Gly  
 85 90 95  
 Arg Thr Glu Val Ser Leu Glu Phe Ser Thr Ala Pro Ala Pro Ser Ala  
 100 105 110  
 Ser Lys Ser Lys Lys Gly Arg Pro Asp Glu Leu Thr Glu Ile Arg Phe  
 115 120 125  
 Tyr Val Pro Gly Thr His Thr Lys Asp Asp Asp Asp Glu Ala Asp Ile  
 130 135 140  
 Thr Lys Asp Asp Glu Glu Val Ser Ala Ala Gln Ala Phe His Asp Met



<211> 48  
 <212> PRT  
 <213> Pinus radiata

<400> 1162  
 Phe Leu Glu Ala Leu Glu Lys Arg Glu Glu Asp Arg Met Met Arg Glu  
 1 5 10 15  
 Glu Ala Trp Lys Arg Gln Glu Met Ala Arg Leu Asn Lys Asp Gln Glu  
 20 25 30  
 Leu Arg Ser Gln Glu Arg Ser Met Ala Ala Ser Arg Asp Leu Ala Leu  
 35 40 45

<210> 1163  
 <211> 255  
 <212> PRT  
 <213> Pinus radiata

<400> 1163  
 Val Ala Leu Ser Asn Asn Pro Leu Ile Phe Ser Ala Lys Val Glu Asn  
 1 5 10 15  
 Gly Thr Pro Ser Tyr Asp Gly Leu Lys His Ala Asn Thr Asn Pro Met  
 20 25 30  
 Pro Phe Ser Gly Leu Gly Asn Val Ser Met Gly Pro Leu Phe Tyr Gln  
 35 40 45  
 Ala Asn Pro Ile Gln Arg Val Lys Arg Val Arg Asp Thr Ser Phe Ile  
 50 55 60  
 Met Gly Pro Pro Ser Ser Pro Phe Gly Arg Met Gly Val Asn Gly His  
 65 70 75 80  
 Met Gly Met Asn Asp Val Ser Lys Ser Leu Gln Pro Gly Phe Lys Ala  
 85 90 95  
 Arg Val Pro Tyr Pro Leu Gln Ala Ala Arg Ser Asp Ser Phe Val Ala  
 100 105 110  
 Gln Gly Cys Phe Pro Tyr Asp Pro Asn Leu Ser Ser Thr Ser Asn Leu  
 115 120 125  
 Pro Leu Gly Gly Phe Ser Ser Gly Ser His Ala Val Met Asn Gly Thr  
 130 135 140  
 Phe Ser Ser Ser Arg Leu Phe Ser Gly Gln Lys Leu Glu Leu Pro Ser  
 145 150 155 160  
 Ser Gln Phe Ala Glu Ser Val Gln Thr Ala Gly Ser Ser Ile Asn Pro  
 165 170 175  
 Val Leu Asn Arg Ser Thr Pro Leu Leu Leu Pro Pro Val Pro Thr Gln  
 180 185 190  
 Thr Ile Asn Gln Val Asp Tyr Ser Phe Ser Thr Pro Lys Asn Ser Gly  
 195 200 205  
 Leu Leu Glu Ser Met Phe Gln Glu Ala Gln Thr Met Gly Gly Val Lys  
 210 215 220  
 Ala His Ser Ser Ser Asn Ser Ser Ile Asp Leu Gln Gly Gly Ser Lys  
 225 230 235 240  
 Ser Ser Ile Ser Asn Pro Leu Asn Asn Gly Phe Leu Cys Arg Ser  
 245 250 255

<210> 1164  
 <211> 147  
 <212> PRT  
 <213> Pinus radiata

<400> 1164  
 Ile Arg Met Glu Glu Pro Leu Gln Ile Ile Asn Ser Ser Pro Ile Gln  
 1 5 10 15  
 Gln Gln His Asp His Asp Asp Asp Asp His Gly His Gly His Glu Glu  
 20 25 30

Glu Val Ile Pro His Pro Leu Leu Pro Pro Pro Gly Asp Thr Cys Ile  
           35                  40          45  
 Val Pro Tyr Ile Met Pro Val Ser Thr Ser Thr Ala Glu Lys His Pro  
       50                  55          60  
 Pro Gln Pro Thr Asn Ile Ala Phe Asn Gly Pro Glu Thr Glu Glu Asp  
   65                  70          75          80  
 Asp Lys Lys Arg Asp Arg Glu His Lys Lys Arg Ser Lys Asn Trp Thr  
           85                  90          95  
 Arg Val Glu Thr Leu Lys Leu Ile Lys Leu Arg Thr Glu Phe Glu Pro  
           100                  105          110  
 Arg Phe Ser Arg Ser Gly Arg Lys Thr Glu Leu Trp Asp Glu Ile Ala  
       115                  120          125  
 Glu Ser Leu Arg Lys Glu Gln Phe Phe Arg Asp Ala Gln Gln Cys Arg  
       130                  135          140  
 Asp Lys Trp  
 145

<210> 1165  
 <211> 202  
 <212> PRT  
 <213> Pinus radiata

<400> 1165  
 Met Asp Gln Gln Gln Pro Thr Ile Pro Ala Leu Pro Gln Val Gly Tyr  
   1                  5          10          15  
 Gly Thr Asn Pro Tyr Ile Ala Pro Pro Ile Gly Gly Pro Pro His Pro  
       20                  25          30  
 Gln Leu Ala Ser Tyr His Gln Gln Leu Gln Ala Phe Trp Gly Asn Gln  
       35                  40          45  
 Met Arg Glu Val Glu Gln Ala Gln Asp Phe Lys Thr His Ser Leu Pro  
       50                  55          60  
 Leu Ala Arg Ile Lys Lys Ile Met Lys Ala Asp Glu Asp Val Lys Met  
   65                  70          75          80  
 Ile Ser Ala Glu Ala Pro Val Val Phe Ala Lys Ala Cys Glu Met Phe  
           85                  90          95  
 Ile Leu Glu Leu Thr Leu Arg Ser Trp Ile His Thr Glu Glu Asn Lys  
           100                  105          110  
 Arg Arg Thr Leu Gln Lys Asn Asp Ile Ala Ala Ala Ile Gly Arg Thr  
       115                  120          125  
 Asp Ile Phe Asp Phe Leu Val Asp Ile Val Pro Arg Asp Glu Phe Lys  
       130                  135          140  
 Asp Glu Gly Leu Val Ile Pro Arg Ala Ala Gly Ala Val Pro Phe Met  
   145                  150          155          160  
 Gly Pro Gly Asp Asn Val Pro Ser Tyr Tyr Tyr Val Ala Gln Gln Ala  
           165                  170          175  
 Pro Asn Val Ala Ala Tyr Ala Pro Pro Thr Gln Gln Met Arg Ser Lys  
       180                  185          190  
 Ala Pro Ala Pro Pro Pro His Gly Ser Ser  
       195                  200

<210> 1166  
 <211> 143  
 <212> PRT  
 <213> Pinus radiata

<400> 1166  
 Gln Gly Ser Leu Thr Leu Pro Arg Thr Leu Ser Arg Arg Thr Val Asp  
   1                  5          10          15  
 Asp Val Trp Arg Glu Ile His Lys Glu Asn Ile Asp Gly Asn Gly Asn  
       20                  25          30  
 Ala Pro Ala Asn Gln Ala Arg Gln Pro Thr Phe Gly Glu Met Thr Leu



					35					40					45				
Glu	Asp	Phe	Leu	Val	Lys	Ala	Gly	Val	Val	Arg	Glu	Asp	Ala	Glu	Gln				
					50					55					60				
Gly	Asp	Gly	Gln	Ser	Phe	Gly	Ala	Phe	Arg	Asn	Ala	Leu	Asp	Gly	Glu				
					65					70					75				
Phe	Val	Ala	Asn	Leu	Ala	Glu	Arg	Asn	Gly	Asp	Asn	Arg	Leu	Gly	Ile				
					85					90					95				
Gly	Asn	Ser	Leu	Gly	Leu	Gly	Phe	Gly	Glu	Arg	Gly	His	Arg	Asn	Gly				
					100					105					110				
Glu	Val	Gly	Ser	Asn	Lys	Ser	Gly	Ala	Gly	Gly	Val	Pro	Gly	Leu	Ser				
					115					120					125				
Leu	Ser	Pro	Thr	Asn	Val	Phe	Leu	Ile	Met	Leu	Pro	Trp	Ile	Trp					
					130					135					140				

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<210> 1167
<211> 90
<212> PRT
<213> Pinus radiata
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	<400> 1167														
Phe	Gln	Arg	Arg	Lys	Lys	Lys	Ser	Ile	Gly	Arg	Gly	Cys	Leu	Lys	Thr
1				5					10					15	
Ser	Ile	Asn	Asp	Val	Glu	Gln	Leu	Lys	Ala	Glu	Lys	Leu	Leu	Leu	Lys
			20					25					30		
Ser	Arg	Ile	Glu	Lys	Lys	Ala	Ser	Tyr	Phe	His	Glu	Leu	Glu	Glu	Gln
		35					40					45			
Ile	Ile	Gly	Leu	Gln	Asn	Leu	Val	Lys	Arg	Asn	Glu	His	Arg	Tyr	Ser
	50					55					60				
Ser	Gly	Asn	Thr	Pro	Ser	Gly	Gly	Val	Ser	Leu	Pro	Phe	Ile	Leu	Val
65					70					75					80
Gln	Thr	His	Pro	Arg	Ala	Thr	Val	Glu	Ile						
				85					90						

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<210> 1168
<211> 105
<212> PRT
<213> Pinus radiata
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<400> 1168															
Gly 1	Ile	Arg	Arg	Ala 5	Thr	Arg	Gln	Lys	Ser 10	Gly	Ile	Leu	Ser 15	Ser	Val
Leu	Ser	Asn	Gln	Asn	Ala	His	Leu	Ser 25	Val	Leu	Ala	Ala 30	Ala	Ala	Ser
Ala	Val	Ala	Thr	Lys	Ser	Met	Phe	His	Val	Phe	Tyr	Asn 45	Pro	Arg	Thr
Ser	Pro	Ala	Glu	Phe	Ile	Ile	Pro	Tyr	Gln	Lys	Tyr 60	Val	Lys	Ser	Cys
Lys 65	Gln	Pro	Leu	Ser	Ile	Gly	Met	Arg	Phe	Lys 75	Met	Arg	Phe	Glu 80	Thr
Glu	Asp	Thr	Ala	Glu	Arg	Arg	Tyr	Thr	Gly 90	Met	Ile	Thr	Ala	Ile 95	Gly
Asp	Ala	Asp	Pro	Ala	Arg	Trp	Pro	Gly 105							
>400 1169															

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<210> 1169
<211> 106
<212> PRT
<213> Pinus radiata
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<400> 1169  
Gln Asp Thr His Ser Glu Pro Met Ala Met Glu Met Gly Leu Val Ile

1	5	10	15
Asp Gly Asp	Arg Phe Ser Ser Glu	Gly Asp Gly Asp	Ile Met Leu Asp
	20	25	30
Gly Glu Asp	Leu Leu Pro Glu Ile	Asn Asp Met Phe Trp	Glu Gln Phe
	35	40	45
Leu Ala Glu	Ser Ala Thr Ser Gly	Gly Thr Glu Glu Ala	Glu Ser Ala
	50	55	60
Ala Gln Glu	Ser Leu Thr Lys Asp	Gln Asp Glu Lys Pro	Ser Glu Asn
65	70	75	80
Gly Asn Trp	Trp Lys Lys Asn Gln	Asn Met Asp Asn Leu	Thr Glu Gln
	85	90	95
Met Gly Gln	Leu Ala Ser Glu Ser	Asn Pro	
	100	105	

<210> 1170  
 <211> 144  
 <212> PRT  
 <213> Pinus radiata

<400> 1170
Asp Gly Ala Val Arg Asp Ala Gly Arg Leu Val Pro Ala Pro Phe Leu
1 5 10 15
Val Lys Met Tyr Arg Leu Val Asp Asp Pro Ser Thr Asn His Ile Val
20 25 30
Ser Trp Gly Glu Asn Asn Asn Ser Phe Val Val Trp Arg Pro Lys Glu
35 40 45
Phe Ser Ala Ser Val Leu Pro Cys Tyr Phe Asn His Ala Asn Phe Ser
50 55 60
Ser Phe Val Arg Gln Leu Asn Asn Tyr Gly Phe Arg Lys Thr Phe Arg
65 70 75 80
Gly Gln Cys Glu Phe Ser Asn Lys Leu Phe Glu Lys Gly Lys Gln Tyr
85 90 95
Leu Leu Cys His Ile His Arg Arg Arg Ala Ser Asn Ser Ser Pro Met
100 105 110
Pro Met Glu Tyr Gly Lys Ser Ser Leu Leu Phe Pro Ile Ile Leu Pro
115 120 125
Thr Gln His Ser Asn Val Leu Ala Ala Pro Leu Pro Ser Ser Leu Ser
130 135 140

<210> 1171  
 <211> 62  
 <212> PRT  
 <213> Pinus radiata

<400> 1171
Lys Glu Arg Ile Leu Thr Glu Glu Asn Leu Phe Leu Arg Lys Lys Cys
1 5 10 15
Gly Asp Glu His Val Asp Cys Ser Ala Phe Arg Thr Pro Pro Ala Gln
20 25 30
Leu Arg Ser Ile Gln Asn Ile Asp Val Glu Thr Gln Leu Val Ile Arg
35 40 45
Pro Pro Thr Val Gln Gln His Pro Asp Val Asp Ser Pro Arg
50 55 60

<210> 1172  
 <211> 88  
 <212> PRT  
 <213> Pinus radiata

<400> 1172
Asp Pro Asn Ala Pro Lys Lys Ala Met Thr Gly Phe Met Phe Phe Ser

1					5					10					15					
Gln	Val	Glu	Arg	Glu	Asn	Leu	Lys	Lys	Ser	Asp	Pro	Gly	Met	Ala	Phe					
				20					25					30						
Thr	Asp	Val	Gly	Arg	Thr	Leu	Gly	Glu	Arg	Trp	Lys	Lys	Met	Ser	Ala					
				35					40					45						
Glu	Glu	Lys	Ala	Pro	Tyr	Glu	Ser	Lys	Ala	Arg	Ala	Asp	Lys	Glu	Arg					
				50					55					60						
Tyr	Lys	Glu	Ala	Met	Ala	Asp	Tyr	Lys	Ser	Gly	Pro	Thr	Asn	Val	Asp					
65					70					75					80					
Ser	Gly	Asn	Glu	Ser	Asp	Ser	Glu													
				85																

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<210> 1173
<211> 106
<212> PRT
<213> Pinus radiata
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<400> 1173															
Leu	Leu	Phe	Gly	Val	Asn	Ile	Asp	Ser	Ser	Ser	Leu	Ile	Val	Pro	Asn
1				5					10					15	
Thr	Val	Ser	Asn	Met	Arg	Ser	Ile	Gly	Ser	Ser	Thr	Asp	Ala	Val	Met
			20					25					30		
Gln	Phe	Gly	Val	Ser	Asn	Tyr	Leu	Asn	Ala	Pro	Pro	Cys	Ala	Ser	Gly
		35					40					45			
Ser	Asn	Ile	Ser	Leu	Asn	Ser	Asp	Ile	Ser	Ala	Ser	Ala	Cys	Leu	Asp
	50					55					60				
Glu	Ser	Gly	Leu	Leu	Pro	Pro	Ala	Glu	Asn	Leu	Gly	Gln	Met	Asn	Ala
65					70					75				80	
Pro	Thr	Arg	Thr	Phe	Ile	Lys	Val	Tyr	Lys	Gln	Gly	Ser	Val	Gly	Arg
				85					90					95	
Ser	Leu	Asp	Ile	Ser	Arg	Phe	Ser	Ser	Tyr						
			100					105							

```
<210> 1174
<211> 108
<212> PRT
<213> Pinus radiata
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	<400> 1174														
Met	Ala	Thr	Thr	Arg	His	Gln	Arg	Ser	Pro	Asp	Ser	Ser	Pro	Arg	Ser
1				5					10					15	
Glu	Asp	Glu	Ser	Gly	Ala	His	Thr	Tyr	Ser	Asn	Gln	Asp	Gly	Ser	Val
			20					25					30		
Lys	Glu	Gln	Asp	Arg	Phe	Leu	Pro	Ile	Ala	Asn	Val	Ser	Arg	Ile	Met
			35				40					45			
Lys	Lys	Ala	Leu	Pro	Ala	Asn	Ala	Lys	Ile	Ser	Lys	Asp	Ala	Lys	Glu
	50					55					60				
Thr	Val	Gln	Glu	Cys	Val	Ser	Glu	Phe	Ile	Ser	Phe	Ile	Thr	Gly	Glu
65				70						75				80	
Ala	Ser	Asp	Lys	Cys	Gln	Arg	Glu	Lys	Lys	Lys	Thr	Ile	Asn	Gly	Asp
				85					90					95	
Asp	Leu	Leu	Trp	Ala	Met	Gly	Thr	Leu	Gly	Phe	Glu				
			100					105							

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<210> 1175
<211> 137
<212> PRT
<213> Pinus radiata
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<400> 1175  
Lys Ser Asp Tyr Arg Asp Ser Asp Asp Glu Gly Gly Gly Thr Val Arg

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      1           5           10           15
Glu Gly Lys Asp Leu Gln Thr Ser Asn Phe Ile Asp Tyr Phe Gly Gln
      20           25           30
Ser Asn His Thr Glu Glu Ala Glu Asn Glu His Asp Ala Ser Val Asp
      35           40           45
Thr Lys Gly Pro Leu Glu Ser Ser Asn Glu Val Gly His Pro Thr Thr
      50           55           60
Tyr Pro Glu Ser Ser Ser Leu Ser Ala Gln Gly Ser Glu Pro Arg Val
      65           70           75           80
Phe Ser Cys Asn Tyr Cys Gln Arg Lys Phe Tyr Ser Ser Gln Ala Leu
      85           90           95
Gly Gly His Gln Asn Ala His Lys Arg Glu Arg Thr Leu Ala Lys Arg
      100           105           110
Gly Gln Arg Ile Gly Ala Phe Gln His Arg Tyr Ile Ser Met Ala Ser
      115           120           125
Leu Pro Leu His Gly Ser Thr Glu Ser
      130           135

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&lt;210&gt; 1176

&lt;211&gt; 206

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1176

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Ser Arg Gly Lys Ala Leu Lys Leu Phe Gly Phe Glu Phe Arg Gly Ser
      1           5           10           15
Glu Gly Gly Ser Phe Glu Gly Thr Asn Gly Ser Asp Gln Pro Gln Asp
      20           25           30
Gly Thr Asn Ile Leu Thr Ala Gly Glu Ala Ser Thr Glu Pro Val Glu
      35           40           45
Glu Glu Leu Val Ile Glu Ala Lys Asn Gly Asp Ser Gly Lys Leu Glu
      50           55           60
Asp Val Gly Ser Pro Val Glu Ala Gly Glu Ser Gly Ser Thr Ser Asn
      65           70           75           80
Cys Leu Gly Ser Ser Ala Gln Glu Asn Arg Lys Tyr Glu Cys Gln Tyr
      85           90           95
Cys Cys Arg Glu Phe Ala Asn Ser Gln Ala Leu Gly Gly His Gln Asn
      100           105           110
Ala His Lys Lys Glu Arg Gln Gln Ala Lys Arg Ala His Leu Leu Ala
      115           120           125
Thr Arg Ser Ala Ala Ala Ser Ala Asn Arg Ser Gly Ala Thr Ala Trp
      130           135           140
Cys Gly Asn Ile Asn Gly Asn Leu Tyr His Arg Asn Phe Leu Phe Asn
      145           150           155           160
Asn Ser Tyr Phe Thr Arg Met Gln Val Phe Gln Glu Asp Phe Pro Thr
      165           170           175
Phe Gln Thr Pro Gln Ala Val Ala Ala Pro Ser Ile Pro His Tyr Ile
      180           185           190
Phe Ser Tyr Gln Gln Gln Gln Gln Ala Pro Val Gln Ser Arg
      195           200           205

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&lt;210&gt; 1177

&lt;211&gt; 116

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1177

```

Val Pro Glu Asn Ser Lys Gln Ile Ile Asn His Gly Leu Ile Leu Pro
      1           5           10           15
Glu Met Gly Ser Val Asp Ser Gly Arg Glu Gly Thr Arg Ala Ile Leu
      20           25           30

```

Ser Asp Asp Cys Val Lys Phe Glu Cys Arg Tyr Cys Cys Arg Val Phe  
           35                  40                  45  
 Pro Thr Ser Gln Ala Leu Gly Gly His Gln Asn Ala His Lys Arg Glu  
           50                  55                  60  
 Arg Arg Arg Ala Met Thr Arg Phe Gln Arg Ser Pro Ser Asp Ser Ser  
 65                  70                  75                  80  
 Asn Tyr Ser Gly Lys Gln Asn Ser Ile Asp Leu Phe Ser Arg Glu Arg  
                   85                  90                  95  
 Val Pro Gly Ser Ser Leu Leu Ser Pro His Gly Thr Arg Asp His Val  
                   100                  105                  110  
 Val Cys Ser Asp  
           115

<210> 1178  
 <211> 122  
 <212> PRT  
 <213> Pinus radiata

<400> 1178  
 Lys Lys Ala Ser Glu Trp Gly Glu Ser Val Val Ser Thr Ser Glu Asn  
 1                  5                  10                  15  
 Ser Asn Asp Leu Asp Pro Pro Thr Tyr Ser Glu Thr Ser Ser Pro Ala  
           20                  25                  30  
 Gln Gly Ser Asp Pro Arg Val Phe Pro Cys Asn Phe Cys Gln Ser Lys  
           35                  40                  45  
 Phe Tyr Ser Ser Gln Ala Leu Gly Gly His Gln Asn Ala His Lys Arg  
           50                  55                  60  
 Glu Arg Thr Leu Ala Arg Arg Ala Gln Arg Met Gly Ser Phe Ala Gln  
 65                  70                  75                  80  
 Arg Tyr Ser Ser Met Ala Ser Leu Pro Leu His Gly Ser Ser Glu Thr  
                   85                  90                  95  
 Ser Trp Thr Pro Ser Arg Phe Leu Gly Ile Lys Ala His Ser Leu Ile  
                   100                  105                  110  
 His Lys Pro Phe Pro Glu Gly Asp Asn Leu  
           115                  120

<210> 1179  
 <211> 113  
 <212> PRT  
 <213> Pinus radiata

<400> 1179  
 Met Thr Gln Ala Thr Asn Tyr Thr Ala Gly Thr Ile Arg Asp Asp Gln  
 1                  5                  10                  15  
 Glu Glu Gln Cys Val Arg Arg Gly Pro Trp Thr Val Asp Glu Asp Met  
           20                  25                  30  
 Ser Leu Ile Arg Cys Val Thr Thr Arg Gly Glu Gly Arg Trp Asn Thr  
           35                  40                  45  
 Val Ala Lys Phe Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu  
           50                  55                  60  
 Arg Trp Leu Asn Tyr Leu Arg Pro Asp Val Lys Arg Gly Asn Ile Thr  
 65                  70                  75                  80  
 Pro Glu Glu Gln Leu Leu Ile Leu Glu Leu His Arg Leu Trp Gly Asn  
                   85                  90                  95  
 Arg Trp Ser Lys Ile Ala Arg Gln Leu Pro Gly Arg Thr Asp Asn Glu  
                   100                  105                  110  
 Ile

<210> 1180  
 <211> 76

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1180

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Met Arg Arg Pro Gln Arg Lys Lys Lys Thr Asp Ala Glu Asp Asp Phe
 1           5           10           15
Asp Glu Cys Tyr Tyr Thr His Met Cys Lys Ile Cys Lys Lys Lys Phe
           20           25           30
Val Ser Gly Arg Ala Phe Gly Gly His Met Arg Ile His Gly Pro Val
           35           40           45
Ala Thr Ala Ala Ala Ala Ala Glu Ser Asn Gly Lys Asn Leu Glu
           50           55           60
Pro Gln Arg Lys Arg Ser Arg Ala Glu Glu Ile Arg
65           70           75

```

&lt;210&gt; 1181

&lt;211&gt; 130

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1181

```

Val Gly Cys Lys Gly Ser Asp Ala Phe Glu Glu Ser Leu Lys His Phe
 1           5           10           15
Cys Arg Val Cys Lys Arg Arg Phe Ala Cys Gly Arg Ala Leu Gly Gly
           20           25           30
His Met Arg Val His Gly Ala Glu Leu Gly Ala Ile Lys Gly Gly Gly
           35           40           45
Leu Glu Glu Gln Phe Glu Lys Gly Arg Val Lys Glu Pro Ser Arg Ser
           50           55           60
Cys Gly Asp Ser Val Lys Glu Gly Val Gln Asp Glu Val Glu Gly Leu
65           70           75           80
Asn Ser Met Tyr Thr Leu Arg Arg Asn Pro Lys Arg Ser Trp Arg Phe
           85           90           95
Ala Asp Gln Asp Tyr Ser Phe Ala Phe Gly Gly Val Asp Gly Ser Gly
           100          105          110
Ala Lys Arg Phe Gly Ser Thr Phe Leu Arg Asp Ser Arg Val Cys Glu
           115          120          125
Glu Cys
130

```

&lt;210&gt; 1182

&lt;211&gt; 86

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1182

```

Arg Asn Tyr Leu Gly Glu Tyr Thr Gly Glu Leu Ile Ser His Arg Glu
 1           5           10           15
Ala Asp Lys Arg Gly Lys Ile Tyr Asp Arg Glu Asp Ser Ser Phe Leu
           20           25           30
Phe Asn Leu Asn Asp Gln Tyr Val Leu Asp Ala Tyr Arg Lys Gly Asp
           35           40           45
Lys Leu Lys Phe Ala Asn His Ser Pro Thr Pro Asn Cys Tyr Ala Lys
           50           55           60
Val Ile Met Val Ala Gly Asp His Arg Val Gly Ile Phe Ala Lys Glu
65           70           75           80
Arg Ile Ala Ala Gly Glu
           85

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&lt;210&gt; 1183

&lt;211&gt; 462

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1183

acaaacaaac	aaacaagacg	gaacgagatg	aagacgggtc	agtcgaagaa	gttcaggggc	60
gtcagacagc	gtcactgggg	ctcttgggtt	tccgaaattc	gccatcctct	gttgaagaga	120
aggggtgtgg	tgggcacgtt	cgagacggct	gaggaggcgg	cacgagccta	cgaccaggcc	180
gccatcttga	tgagtggccg	caatgcaaag	accaacttcc	cgacatctca	aaccacgaac	240
ggcgaccccc	ccgctgcca	ttccttgtct	tctcgaagc	acttgtcgga	gatcctccac	300
gcgaantcaa	ganatgcagc	aagacgccgt	cgccatccct	cacctgccta	aggctcgaca	360
ctgagaactc	ccacatcgga	gtctggcaga	agggtgccgg	ccagcgtcag	actcaactgg	420
gtatgaccgt	acagtcggaa	caaaaatccg	atccattggt	ag		462

&lt;210&gt; 1184

&lt;211&gt; 340

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1184

gactccccct	atccccctct	tttctccctc	tcaagaatca	agagattact	atggaaagcg	60
aacgctacga	tgagacgaca	gaggggcagc	gaatcaagag	aaggccgcac	cagcagcagc	120
agcagcagca	gcagcggcgg	cagaagcctt	acaggggtat	ccggatgagg	aagtggggca	180
agtgggtggc	cgagatcagg	gagcccaaca	agcgctcccg	catctggctc	ggctcctatg	240
ccacccccgt	ggccgcgcgc	cgcgcctacg	acaccgccgt	cttctacctc	cgcgccccct	300
ccgcccgcct	caacttcccc	gacctcatct	ggcgcgaggg			340

&lt;210&gt; 1185

&lt;211&gt; 190

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1185

cttgggggtt	acatggcgcg	acgtggcgga	ggaaggaggc	gaacggcggc	tccgaggcgt	60
ccgacgccgt	cttgccgcga	gctcatcatc	gccatcgta	caaggagtg	aggatgcgga	120
agtgggggaa	gtgggtggcg	gagatacggc	agcccaacag	ccgggaccgc	atctggctcg	180
gctcctacgc						190

&lt;210&gt; 1186

&lt;211&gt; 473

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1186

aacaaaggtn	tgtgtatgga	accattcttg	atagcattgc	aaaggttact	ggaattgtga	60
agtttgatct	gcatgctgag	ccagaggaag	gaaaaagaa	gattgaggtc	ggaggaaatg	120
ttgcagggtg	gtttgaccta	ggaccaggta	gaattnggtt	ctgaagctgt	ttttgtccct	180
cgagagcctg	gcatcacttc	tgaagaagat	gatgggtacc	tgatattctt	tgtccatgat	240
gaaagcacag	ggaagtcggc	agtaaatgta	attgatgcga	aaaacatgtc	atctgatcct	300
gttgctgtcg	ttgaattacc	ccatagggtt	ccttatggct	tccatgcctt	cttcgtgact	360
gaggaacaac	ttcaggaact	ggctaagctg	taggtctcta	catgcacgaa	ttgttgggaa	420
tgcatatggt	gcgaggggag	gcatactctt	ggaaagctgc	tacagttgat	cta	473

&lt;210&gt; 1187

&lt;211&gt; 333

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1187

accagatcca	gatgcagagg	tcattgcact	atcgccaaag	acgctcatgg	cgacgaacag	60
gttcgtttgc	gagatatgca	acaaaggctt	ccagagggac	cagaacctgc	agctgcaccg	120
gagggggccac	aacctgccat	ggaagctccg	gcagaggagc	aaggagatcg	tcaagaagaa	180

ggtttatata	tgccctgaga	agacgtgcgt	gcaccaacgac	ccttcaaggg	cacttggcga	240
cctcactggg	atcaagaagc	acttcagccg	gaagcatggc	gagaagaagt	ggaagtgtga	300
gaagtgtctg	aagaagtacg	cagtcacgtc	aga			333

<210> 1188  
 <211> 420  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1188						
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cgccgcccgc	cccttcggcc	acgacgacgc	ggacggccac	ccgtgggcca	aacggaagcg	120
ctccaagcgc	ccccgcgcgc	accctcagga	ccagccctcc	gaggaggagt	acctggccct	180
ctgctctatc	atgctcgccc	gccgcgcgcg	ccgacccggc	agcagcggca	ggctccacga	240
gtgctccatc	tgccacaagg	ccttccccac	cggccaggcc	ttggggcgcc	acaagcgggtg	300
ccactacgac	ggcggcagca	gtagcagcgc	cgcccgtgct	gcctcttcct	cagaagccgg	360
cggtcctagc	cacacgactg	tcagccaccg	cgagccgacg	gacttgaact	tgccggcctt	420

<210> 1189  
 <211> 365  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1189						
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aggacgtcgc	cggaagggtg	tggcggttcc	ggtattcgta	ctggaacagc	agccagagct	180
acgtgtcac	caaggggttg	agccgggttcg	tgaaggagaa	gagcctgaag	gccggcgaca	240
ccgtntgctt	ccagcggctg	accggggccg	acaagcagct	ntacatcgac	ttcaagccgc	300
ggggccagcc	gccggccggc	ccggccgcgc	cgccgcgcgc	gcccgtacag	atggtgaggc	360
tgttc						365

<210> 1190  
 <211> 434  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1190						
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cctagctcga	gcacgcgttc	gtggatgtgg	aaccctagtg	ccgcccagga	ggatgatgac	180
tcgtgggagg	tgagagcctt	cgccgaagac	actagcaaca	ttatggggcg	aacctggccg	240
ccgaggctct	acacttgctc	tttctgtaga	agggagttcc	ggtccgcccc	agccctcggc	300
ggccacatga	atgtccaccg	cagagaccgt	gctaagcttc	accaatcaca	attccggccg	360
ctggcgaaac	aaaattctcc	tttcgcttct	tgctcttccc	cgtcctcctc	gactctgcta	420
ttcccgaatc	aaga					434

<210> 1191  
 <211> 479  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1191						
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acaaaaaaa	tggtgagggg	gaagactcag	atgaggaggga	tagagaacaa	gacgagcagg	120
caagtgacct	tctcgaagcg	tcggaacggg	ctgctcaaga	aggccttcga	gctctcggtt	180
ctttgcatg	ctgaagtcgc	cgccatcatt	ttctctccta	ctggaaaact	ttatgagttc	240
tctacctcaa	gcatgagcag	cataatagaa	cgatatcaaa	ggaaaacaaa	ggacccgggg	300
tgcagcgaga	aaactaccga	aatcgatttg	cagaatatga	agggaaactc	tctagacatg	360
gcaaagatga	tcgaacttct	caacgtttcc	aacagtcggc	tctcaggaga	actttcagat	420
acgtgttcag	ttgaggagct	acaatcaaca	cagaacctgt	tagagagaag	cttatccaa	479



<210> 1192  
 <211> 310  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1192  
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 actctcccac cgcggcctca gcgcggttcc agttcatgga ggagcccttg agctcccgtc 180  
 tcttgagacc cctgaacaag cgcaagcgtc ccaagcggcc ccaccacct ccctccgaag 240  
 atgagtacct cgccctctgc ctcatcatgc tcgcccgcag cggcgcggcc cccaagccca 300  
 accaccacgc 310

<210> 1193  
 <211> 466  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1193  
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 caaagccttc tggagatcac cttttatcag ctaccaccag tcagataggt ctattgaata 120  
 tgcttgattg ctggttcttc aagcatatgc aactacaaag actcccata caaagcacta 180  
 gctgcatata cacttttaag ctaactaaca agagaattta aaaagaaaat cctcgctgca 240  
 ccaaaaaggc tcgatccata tgggcaccaa aacaaatagc tcacattggc ataagctttg 300  
 gaccattatc aggcatgccc atccctgcag ctaactcagc atcaagctga gtatgtggcg 360  
 caggacccat catttgcttc atacgtttct tgtggcgctt cgtcttgaaa tgctcgctcc 420  
 tcgtagcaac attcggaaaa tatcggtcgc agtgcaggca atagta 466

<210> 1194  
 <211> 295  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1194  
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 ccacaaccac cgccaccgcc ttccaccacc aagaaaaaga ggaatctccc tggaatgccc 180  
 gatccagatg cagaggtgat agctctgtct ccacgacct tattggccac caacaggttc 240  
 gtctgcgaaa tctgcaacaa gggatttcag agggaccaga acttgcagct ccaca 295

<210> 1195  
 <211> 337  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1195  
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 gtgcagtcg tcgcagtcgg agtctctcgc gagccacgcc gcgtgctccg acgaggagcc 180  
 ggccgtggcg ctggcttcca gccggcccaa gaggcgggt gggcggaagg tcttcaagga 240  
 gacgaggcac ccggtgtacc gtgggtgctg gcggcggaac aggggcaagt ggggtgtgca 300  
 gctccgggag cccaacaaga agaccgggt atggctc 337

<210> 1196  
 <211> 450  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1196  
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cggctctgcc gaaactcacg gagagagaga gatggcggag agagaggaga aggggaagta 120
cgacgagatg atgatgaaga aggggagcga cgganggata gcgagggtga atcccacgcc 180
gaagaagggg gtgacgtcca aggttgtgga ctacattgag aagctgatcg tgaagtcat 240
gtacgactcc tctctgcctc accaatacct cgccggcaac ttctgtcccg tcgccgacga 300
gacccctccc gtcaccgacc tccccgtcgt cgcccatctc cctgattgct tgaatggaga 360
attcgtccgg gtgggccccca atcccaagtt tgccccggtc gccggatacc actggtttga 420
tggagatggc atggntcatg ggatgcggat 450

```

&lt;210&gt; 1197

&lt;211&gt; 351

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1197

```

ctccagccag cttctgtctc ttataaacac tagccccacc ccattcatta tccacttcac 60
tccaacccaa cagctatcgc actatcccac tgcagacgcc cccccacgaa ccctttctct 120
tctgatcccc atcccactc ctgccgttcc gacttcccca agccgtcctt ctgctgcccg 180
ctgtccaacg ggagtagcgc catggcagcc cccgggaact tctccgacga ggaggtgcgc 240
ctcgcgtccc accacccaaa gaagcgcgcc gggaggaaga agttccggga gacgcgccac 300
cccgtgtacc ggggagtgcg gctgcgtgac tcgggcaagt gggctctgcga g 351

```

&lt;210&gt; 1198

&lt;211&gt; 359

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1198

```

agaacacctc agaatcaaca ccactcccca atttctctct ctaagatccc acaccaacc 60
gccaccctca atctctctct ttctctctct tcttcagtgt ctgccatggc tttggaggcc 120
ctcagctccc ccaccgtccc ctccgccccg ttccaattca tgaaggactc ctccccgcc 180
gccgcgcgcg ccgcctctct ctctctctcc gcttacgacc tccccctcgc cgagccctgg 240
gccaaagcga agcgtccaa gcgccccac aaccgcctt ccgaggacga gtacctcgcc 300
ctctgcctca tcatgtctgc ccgcggcgcc gccggccgga cctccccccc gccgcctcc 359

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&lt;210&gt; 1199

&lt;211&gt; 645

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1199

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tcgactgaga gatcctagt gaaatagaag atttcctgat accatcgatc cattcttctc 60
caatggctgc gaatttcgtc attccaacca aaatgaaggc ttgggtgtac cgtgagcacg 120
gagacgtcgc caacgtattg ggattggacc cggaactcaa ggtccctgaa ttgcaagaag 180
gccaaagtgt ggttaaagtt cttgccgcgg cgtcaatcc aatcgacacc gcgagagtga 240
angggggtta tcaagctccc ggcttttctc taccggccgt gccaggttac gatctcgccg 300
gcgttgtggt gaaggtgggc cgcgaagtaa aggagctcaa ggtcggggac gaggtatatg 360
gatttatgtt tcacgccaaag aaagacggga cgctggctga gtacgcagcc gtggaagagt 420
cattcttggc tttgaagccc aagaagctgc gtttcgggga ggctgcttct ctgccgtggt 480
cattcagacc gctatggagg ccttgaaaga actggcctct ctcatggcaa gtcccttctt 540
cgtcttaagt ggtgctggtg gcgtcggcac actcataata cagctagctt aaggaagttt 600
tggtgcatca agagttccag ttcattcaac actgggaaac ctaga 645

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&lt;210&gt; 1200

&lt;211&gt; 376

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1200

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tttttttttt tttttgtgta ctggtgcact atgaattgtg agcattcaat caaactatat 60
atagacaaca ttcttcctta tataggcggg agcaactacg gngttgacag caaaatttac 120
aaagccagca gctagcacag gatgtcaaga ttcacctcca aaccgataaa gtcgacatgg 180

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ctctattaat	ccagccaaga	tatagagccc	cctccctctg	ctcgattctg	taattcccgt	240
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tgaaccggc	catttggaat	ctggaccgccc	atttgccgaa	aagctcatgc	ctttccatcc	360
tctcangccc	atcaca					376

&lt;210&gt; 1201

&lt;211&gt; 461

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1201

cgacaccgac	caggggtgtc	atgtattgtt	tgtatacaac	ccccagtggt	aaagggccca	60
aaacacaagc	caacatgcac	atgtaatgtc	tgtctgaccg	taaagcgccg	tttccgcacc	120
ttgatgctga	ggcgcgaaaa	gaaacagttg	gagaaagaag	gggaagggtc	gcgcaagaag	180
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aataacaaca	atgcaaatgg	cagcccaagc	cagaaaaagg	tgggcaatga	tggttccgac	300
gacgaaatga	acaggggttaa	aagctcgggt	tcacctttta	aaggtcagat	cgatcttaat	360
attcagccag	agcgcgagga	ggagctctcg	cctgggtcag	attctgggtg	tatgatgaag	420
ttgctacatg	atgccacca	gaatatctca	ggcagagggc	t		461

&lt;210&gt; 1202

&lt;211&gt; 447

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1202

ggaagtacga	cgagatgatg	atgaagaagg	ggagcgacgg	agggatagcg	gaggtgaatc	60
ccacgccgaa	gaaggggggtg	acgtccaagg	ttgtggacta	cattgagaag	ctgatcgtga	120
agttcatgta	cgactcctct	ctgcctcacc	aatacctcgc	cggcaacttc	gtccccgtcg	180
ccgacgagac	ccctcccgtc	accgacctcc	ccgtcgtcgg	ccatctccct	gattgcttga	240
atggagaatt	cgctccgggtg	ggccccaatc	ccaagtgtgc	cccggtcgcc	ggataccact	300
ggtttcatgg	agatggcatg	gttcatggga	tgcggataaa	aaatggcaaa	gctacttacg	360
tctctcgcta	tgtgaggacg	tcgaaactta	agcaagagga	gtactatggg	ggagctaaat	420
ttatgaagat	tggagacctt	aaagggc				447

&lt;210&gt; 1203

&lt;211&gt; 454

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1203

catattttca	tgttgctacg	ccccgtcctt	tggcctgcat	ccatggccaa	tcagccaccc	60
ggtgagcccc	aaccaaattc	gccaccgcca	ccgccaccag	ccccagcgat	ccaaatccct	120
gaccaaccac	cgcataattc	gccttcttct	tcttcttctt	cttcttcttc	ttcttcttca	180
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tcgtcgccgc	tggctcaatc	cacagggagg	caccgcctt	accgtggagt	ccggtcccgc	300
agcgggaagt	gggtctccga	gatccgcgag	ccccgcaaga	ccaccgcgat	ttggcttggg	360
acatacccga	atcccagat	ggccgcccgc	gcctttgacg	tggccgcgct	ggctctgaaa	420
ggctccgacg	ccgcctgaa	cttcccccat	gatg			454

&lt;210&gt; 1204

&lt;211&gt; 352

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1204

gttttttacg	catgtagaaa	aagtcattga	gtttgcctgt	gctgcataca	ttcattgctt	60
tagctgactg	gggcctgaga	gagtttgtgt	atgttactgg	cagacgccga	aggcggaaag	120
gagaagaagg	aagttaaaga	aaggttcgcc	ttcaagacga	aatccgaggt	tgagatacta	180
gatgacggat	tcaagtggag	gaagtacggg	aagaagatgg	tgaagaacag	tccgaatccg	240
aggaactact	atcgggtgtc	ggtggaaggc	tgtcctgtga	agaagagagt	cgaacgggac	300

agagacgacc caaggtatgt aataacaaca tacgagggca tccataatca cc 352

<210> 1205  
<211> 400  
<212> DNA  
<213> Eucalyptus grandis

<400> 1205  
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caggaccaga ctcgccagat tcagatcatc ccacctggca agacctggag acaccaaadc 180  
ttgagattaa agccgagccc atcaccttgg aatctccaga gtcggagtgt gggtcgcccg 240  
agaagaatca ggacgaggct ggctccgcgg ccaaggcaag ttacagaggg gttcggcgaa 300  
gaccatgggg aaaatatgct gcggagatac gggacccgac acgtaaaggg agccgggtct 360  
ggttagggac ctacgacacg gacgtagatg ctgccaaggc 400

<210> 1206  
<211> 408  
<212> DNA  
<213> Eucalyptus grandis

<400> 1206  
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ctgggtccgag ctcgaccccc cctccgacct cctcagcctc gacggccccg tggcccaagg 180  
ccaccccaac cctttctctc tcgtcgcaaa ccaactcaac caagtgatga agagtgaaga 240  
gaagaacagt gaggaggcgg gtcacggaca cgtgtcggag acccagaaga gccagagcaa 300  
tggccggagc cagagggctc gcaagaacgt gtacagaggg atccggcaga ggccgtgggg 360  
caagtgggcc gccgagatca gggacccccca caagggcgctc cgcgtctg 408

<210> 1207  
<211> 270  
<212> DNA  
<213> Eucalyptus grandis

<400> 1207  
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accgggaggc ccgtaagatc cgcggcaaga agggcaaggc gaatttcccc aacgaggacg 180  
acgccttctc caccatcccc cgggctcacc agaccagca ccaccacccc caggtccccg 240  
aactaccctc ctctgtatca acccaactgg 270

<210> 1208  
<211> 339  
<212> DNA  
<213> Eucalyptus grandis

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<400> 1209

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&lt;210&gt; 1210

&lt;211&gt; 521

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1210

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&lt;210&gt; 1211

&lt;211&gt; 537

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1211

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&lt;210&gt; 1212

&lt;211&gt; 399

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1212

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&lt;210&gt; 1213

&lt;211&gt; 283

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1213

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&lt;210&gt; 1214

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1214

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&lt;210&gt; 1215

&lt;211&gt; 358

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1215

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&lt;210&gt; 1216

&lt;211&gt; 329

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1216

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&lt;210&gt; 1217

&lt;211&gt; 346

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1217

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&lt;210&gt; 1218

&lt;211&gt; 468

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1218

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&lt;210&gt; 1219

&lt;211&gt; 162

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1219

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&lt;210&gt; 1220

&lt;211&gt; 354

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1220

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&lt;210&gt; 1221

&lt;211&gt; 310

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1221

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&lt;210&gt; 1222

&lt;211&gt; 315

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1222

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&lt;210&gt; 1223

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 <213> *Eucalyptus grandis*

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<210> 1226  
 <211> 415  
 <212> DNA  
 <213> *Eucalyptus grandis*

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 <213> *Eucalyptus grandis*

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&lt;210&gt; 1228

&lt;211&gt; 435

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1228

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&lt;211&gt; 252

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1229

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&lt;210&gt; 1230

&lt;211&gt; 326

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1230

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&lt;210&gt; 1231

&lt;211&gt; 424

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1231

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&lt;210&gt; 1232

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1232

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&lt;210&gt; 1233

&lt;211&gt; 508

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1233

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&lt;210&gt; 1234

&lt;211&gt; 503

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1234

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&lt;210&gt; 1235

&lt;211&gt; 367

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1235

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&lt;210&gt; 1236

&lt;211&gt; 360

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1236

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&lt;210&gt; 1237

&lt;211&gt; 539

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1237

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&lt;210&gt; 1238

&lt;211&gt; 520

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1238

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&lt;210&gt; 1239

&lt;211&gt; 489

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1239

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&lt;210&gt; 1240

&lt;211&gt; 306

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1240

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&lt;210&gt; 1241

&lt;211&gt; 366

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1241

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&lt;210&gt; 1242

&lt;211&gt; 340

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1242

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&lt;210&gt; 1243

&lt;211&gt; 684

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1243

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&lt;210&gt; 1244

&lt;211&gt; 329

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1244

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&lt;210&gt; 1245

&lt;211&gt; 383

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1245

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&lt;210&gt; 1246

&lt;211&gt; 380

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1246

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&lt;210&gt; 1247

&lt;211&gt; 360

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1247

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&lt;210&gt; 1248

&lt;211&gt; 351

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1248

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&lt;210&gt; 1254

&lt;211&gt; 380

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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&lt;211&gt; 350

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1255

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&lt;211&gt; 377

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1256

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&lt;211&gt; 651

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1257

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&lt;210&gt; 1258

&lt;211&gt; 311

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1258

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&lt;211&gt; 588

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1259

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&lt;210&gt; 1260

&lt;211&gt; 620

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1260

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&lt;210&gt; 1261

&lt;211&gt; 562

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis



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<210> 1262

<211> 384

<212> DNA

<213> Eucalyptus grandis

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tacgactcct ctctgcctca ccaatacctc gccggcaact tcgctcccg cggcagcag 180  
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<210> 1263

<211> 381

<212> DNA

<213> Eucalyptus grandis

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<211> 316

<212> DNA

<213> Eucalyptus grandis

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<211> 356

<212> DNA

<213> Eucalyptus grandis

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&lt;210&gt; 1266

&lt;211&gt; 360

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1266

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&lt;210&gt; 1267

&lt;211&gt; 375

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1267

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&lt;210&gt; 1268

&lt;211&gt; 567

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1268

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&lt;210&gt; 1269

&lt;211&gt; 567

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1269

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&lt;210&gt; 1270

&lt;211&gt; 325

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1270

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&lt;210&gt; 1271

&lt;211&gt; 365

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1271

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&lt;210&gt; 1272

&lt;211&gt; 365

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1272

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ttctg						365

&lt;210&gt; 1273

&lt;211&gt; 328

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1273

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&lt;210&gt; 1274

&lt;211&gt; 390

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1274

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&lt;210&gt; 1275

&lt;211&gt; 384

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1275

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&lt;210&gt; 1276

&lt;211&gt; 382

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1276

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&lt;210&gt; 1277

&lt;211&gt; 367

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1277

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&lt;210&gt; 1278

&lt;211&gt; 384

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1278

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&lt;211&gt; 368

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1279

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&lt;210&gt; 1280

&lt;211&gt; 341

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1280

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&lt;210&gt; 1281

&lt;211&gt; 295

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1281

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&lt;210&gt; 1282

&lt;211&gt; 365

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1282

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&lt;211&gt; 359

&lt;212&gt; DNA

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&lt;211&gt; 381

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 1289

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&lt;211&gt; 330

&lt;212&gt; DNA

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&lt;210&gt; 1291

&lt;211&gt; 296

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

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&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1297

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&lt;210&gt; 1298

&lt;211&gt; 500

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1298

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&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1299

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&lt;213&gt; Eucalyptus grandis

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&lt;211&gt; 483

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1301

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&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1302

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&lt;211&gt; 348

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1303

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&lt;210&gt; 1304

&lt;211&gt; 349

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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&lt;210&gt; 1312

&lt;211&gt; 472

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1312

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&lt;210&gt; 1313

&lt;211&gt; 384

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1313

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&lt;210&gt; 1314

&lt;211&gt; 428

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1314

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&lt;210&gt; 1315

&lt;211&gt; 140

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1315

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&lt;210&gt; 1316

&lt;211&gt; 502

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1316

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&lt;210&gt; 1317

&lt;211&gt; 365

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1317

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gttca						365

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 <212> DNA  
 <213> *Eucalyptus grandis*

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 <212> DNA  
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 <213> *Eucalyptus grandis*

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 tcag 364

<210> 1322  
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 <212> DNA  
 <213> *Eucalyptus grandis*

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&lt;210&gt; 1323

&lt;211&gt; 382

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1323

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&lt;210&gt; 1324

&lt;211&gt; 377

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1324

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&lt;210&gt; 1325

&lt;211&gt; 305

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1325

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acgac						305

&lt;210&gt; 1326

&lt;211&gt; 288

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1326

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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1328  
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<210> 1331  
 <211> 337  
 <212> DNA  
 <213> Eucalyptus grandis

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<210> 1332  
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<212> DNA  
<213> Eucalyptus grandis

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<212> DNA  
<213> Eucalyptus grandis

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ca 362

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<212> DNA  
<213> Eucalyptus grandis

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<213> Eucalyptus grandis

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<210> 1336  
<211> 382  
<212> DNA  
<213> Eucalyptus grandis

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&lt;210&gt; 1337

&lt;211&gt; 322

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1337

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&lt;210&gt; 1338

&lt;211&gt; 536

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1338

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&lt;210&gt; 1339

&lt;211&gt; 438

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1339

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&lt;210&gt; 1340

&lt;211&gt; 533

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1340

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&lt;210&gt; 1341

&lt;211&gt; 363

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1341

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ctg						363

&lt;210&gt; 1342

&lt;211&gt; 316

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1342

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gccgagctcg	gtccat					316

&lt;210&gt; 1343

&lt;211&gt; 322

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1343

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&lt;210&gt; 1344

&lt;211&gt; 323

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1344

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&lt;210&gt; 1345

&lt;211&gt; 235

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1345

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&lt;210&gt; 1346

&lt;211&gt; 350

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1346

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&lt;210&gt; 1347

&lt;211&gt; 197

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1347

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&lt;210&gt; 1348

&lt;211&gt; 315

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1348

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agcattgtca	acaga					315

&lt;210&gt; 1349

&lt;211&gt; 329

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1349

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&lt;210&gt; 1350

&lt;211&gt; 313

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1350

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ccacaaggac	atgatattga	aacaagaaca	ggcacaagca	gctgcctcct	cgattgagag	300
cattgtcaac	aga					313

&lt;210&gt; 1351

&lt;211&gt; 305

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1351

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aataaagatc	gagttttatc	aggacaaatc	gagacgccat	atcaccttct	ccaaaaggaa	300
agctg						305

&lt;210&gt; 1352

&lt;211&gt; 517

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1352

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&lt;210&gt; 1353

&lt;211&gt; 472

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1353

tttttttttt	tttcagctaa	attggagcag	ctctctttta	tacttactga	actagtaatc	60
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&lt;210&gt; 1354

&lt;211&gt; 472

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1354

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&lt;210&gt; 1355

&lt;211&gt; 503

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1355

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&lt;210&gt; 1356

&lt;211&gt; 360

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1356

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&lt;210&gt; 1357

&lt;211&gt; 377

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1357

aaaacaacct	ccctcagctc	ctcttcacca	ctggtttttg	agatgatctg	tgtgctcggc	60
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&lt;210&gt; 1358

&lt;211&gt; 360

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1358

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&lt;210&gt; 1359

&lt;211&gt; 347

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 1359

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&lt;210&gt; 1360

&lt;211&gt; 326

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 1360

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ttgacgcgcg	gctccctgat	tccctg				326

&lt;210&gt; 1361

&lt;211&gt; 526

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 1361

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&lt;210&gt; 1362

&lt;211&gt; 307

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 1362

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gaaatactcg	tatgtttcaa	tggacaccga	gttctcggag	tgggtggcgcg	gcccataagg	180
aacttcaaaa	cgctcctcga	ctaccactac	cagacgatgc	gctgtaacgt	cgaccttctc	240
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tctacgt						307

&lt;210&gt; 1363

&lt;211&gt; 353

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1363

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aaacattatc	cacctgcacc	tgacgattaa	atctggaggt	tggagaagat	cgc	353

&lt;210&gt; 1364

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1364

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ccaatttgta	aatcccaaag	ttcaagcctc	tattgcagcc	aatacatggg	ttgtcagtgg	300
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&lt;210&gt; 1365

&lt;211&gt; 306

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1365

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atgcgg						306

&lt;210&gt; 1366

&lt;211&gt; 345

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1366

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ctgaaggagt	agctgggaaa	tcacacggaa	atcactcttt	aactcggcag	ccatcaatat	300
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&lt;210&gt; 1367

&lt;211&gt; 292

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1367

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<212> DNA  
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 aatttaggga tatttatatg catgcaatgt tcaggaatcc atagaagtct tggggtagac 360  
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<212> DNA  
<213> Eucalyptus grandis

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&lt;210&gt; 1387

&lt;211&gt; 320

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1387

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&lt;210&gt; 1388

&lt;211&gt; 409

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1388

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&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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&lt;210&gt; 1390

&lt;211&gt; 329

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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&lt;210&gt; 1391

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&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1391

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&lt;210&gt; 1392

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&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1392

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caatcaagga	acagt					555

&lt;210&gt; 1393

&lt;211&gt; 525

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1393

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&lt;210&gt; 1394

&lt;211&gt; 443

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1394

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&lt;210&gt; 1395

&lt;211&gt; 409

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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&lt;210&gt; 1396

&lt;211&gt; 462

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1396

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ccgagatcag	agaccccggg	acgaagaagc	tcgtgcggct	cggcactttc	ggctcgccgg	420
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&lt;210&gt; 1397

&lt;211&gt; 407

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1397

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&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1398

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&lt;211&gt; 474

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1399

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&lt;210&gt; 1400

&lt;211&gt; 443

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1400

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&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1401

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&lt;211&gt; 384

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1402

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&lt;210&gt; 1403

&lt;211&gt; 380

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1403

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<213> Eucalyptus grandis

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<213> Eucalyptus grandis

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&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1413

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&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1414

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&lt;211&gt; 313

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1415

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&lt;210&gt; 1416

&lt;211&gt; 489

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1416

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&lt;210&gt; 1417

&lt;211&gt; 372

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1417

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&lt;211&gt; 354

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1418

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&lt;210&gt; 1419

&lt;211&gt; 540

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1419

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&lt;210&gt; 1420

&lt;211&gt; 349

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1420

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<210> 1423  
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<212> DNA  
<213> Eucalyptus grandis

<400> 1423  
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gagaggcaga ggaggagaa gcttaatcag aggttttacg ccctcagggc cgtggttcca 180  
aatgtatcaa agatggataa ggcttactg ctccaagatg cggagtctta tatcaggagg 240  
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gcaaaacctc cgg 373

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<212> DNA  
<213> Eucalyptus grandis

<400> 1424  
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tgatcaagaa gaagaccccg agccccgagc aggccctgat tcgccctcct cgggggaaga 180  
ctccaangtg aatgctatcg agccgtcnca aaagagaagg aagagcgtga agaancgagt 240  
ggtgtcgggt ccgatcgcgg gcgaccccg gggatccaag agcaaagggg aggcctaccc 300  
gccgtccgat tcgtggcggt ggaggaagta cggccaaaag cccatcaagg gctcgcctta 360  
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gcgca 425

<210> 1425  
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<212> DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1425

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gcggcgagtc	gtcctcgctt	gataagagga	gcgatgtctt	cttggttggg	gcttctaagg	180
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ggtcaaggag	ctcgcagtat	agaggggtta	ctttttatag	gaggactgga	agatgggagt	300
cgcacatatg	ggactgtgga	aaacaagtgt	atttgggtgg	attcgacact	gcacatgctg	360
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tttgagtgat	tatg					434

&lt;210&gt; 1426

&lt;211&gt; 414

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1426

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ccatttgacc	agttcccat	gtggggagac	accttcaaag	ctgacaagg	taaaaatctt	120
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cggagaaga	aatatgtaca	acaactagaa	tcaagccgct	tgaagctagc	acagttggag	360
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&lt;210&gt; 1427

&lt;211&gt; 332

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1427

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gtagtggcaa	cgcttgtgcc	cgcccagggc	ct			332

&lt;210&gt; 1428

&lt;211&gt; 318

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1428

gatccaccca	actggccaca	gcagcaagca	aatcaacaat	caggagcaag	cagtgaagatt	60
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cttaagtgcc	cccgatgcga	ctcgacaaac	accaagttct	gctacttcaa	caactacagc	240
ctcacgcaac	cgcgccactt	ctgcaagagt	tgccgccggg	actggacccg	aggaggtgcg	300
tgaggaacgt	gccagtcg					318

&lt;210&gt; 1429

&lt;211&gt; 349

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1429

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ggcgccatcc	ttgcagttgt	cgagatccga	ttcattgact	gaagaaggcg	ccttgataaa	180

tgctgactgt	cgagatgttt	ccccgagaaa	cttcaaagag	agtgggtgcag	gttcattctc	240
agcaagactt	agctgagaca	ttccaactat	ttgggtcgata	tttaggggtt	cttttggaat	300
tactgggatt	ggcttttagca	cacggtgatg	agatgtctcc	accaccctt		349

<210> 1430  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1430						
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cgccgtcagc	cccaggcccc	agggcggcgc	caaggagatc	cgcttcgcgc	gcgtcaggaa	180
gcggcgctgg	ggccgctacg	ccgccgagat	ccgccgaccca	ggcaagaaga	cccgcgtctg	240
gctcggcacc	ttcgacaccg	ccgaggaggc	cgcccgcgcc	tacgacacgg	cggcgcgtga	300
gttccgcggc	gccaaaggcca	agaccaactt	ccccaccgcc	gacgagctcg		350

<210> 1431  
 <211> 350  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1431						
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gcttgctcaa	aaccgtgaag	ctgccagaaa	gagtagatta	aggaaaaagg	catatgtcca	180
acaactggag	agtagcaggc	tgaaactcac	ccaactagag	caagaactgc	agcgagcccg	240
tcagcagggc	atthttcatth	caggtagtgg	agaacaatcc	cactcaatga	gcggaaatgg	300
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<210> 1432  
 <211> 317  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1432						
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gtcttccggg	ggaacataca	gtactggttg	tagtanaggc	tgtggtggca	ggtcagacta	180
taagatcacg	agaaaagata	gggaatctat	gccaacatg	agcgagcctc	ttgttgcttc	240
tttgtatgtt	cctaggaatg	ataagcttgt	gaaaattgat	ggcaacttga	taattcattc	300
tattatggcg	agtgaga					317

<210> 1433  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1433						
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tagtatctca						370

<210> 1434  
 <211> 210  
 <212> DNA  
 <213> Eucalyptus grandis

&lt;400&gt; 1434

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tcgtcaatca	tgtcaaaacc	ttcttcgttg				210

&lt;210&gt; 1435

&lt;211&gt; 557

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 1435

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tgccgggtcag	gccctgcgcc	gtcaagtccg	aggactccga	ggagagcagc	aagacctcgg	120
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gacgacaaca	acaacagcag	cagcaacccc	ttctcctctt	cgactttccc	gtcgggtgaag	540
cacgagcccg	aagctgc					557

&lt;210&gt; 1436

&lt;211&gt; 438

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 1436

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tctctctttc	tctctctttc	tcagtgtctg	ccccgtctgc	gacaagggct	tccctccta	120
ccaggccctg	ggcgccaca	aggccagcca	ccgcaagcac	gcctcctccg	ccgcggccgc	180
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cgccccctcc	gccgcgcgcg	ccccggccgc	cagcgggggtg	agcgtgtcgg	agggcggtggg	420
gtccacgcac	acgcagag					438

&lt;210&gt; 1437

&lt;211&gt; 327

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 1437

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aaagggaagg	aggtaaaaag	aaaagaaaaag	gaagccatgg	ctccgagaga	aaagcccagc	120
gtcgccgcca	tcccaaacc	taacggcgct	aaggaaatcc	gtttccgggg	cgtccggaag	180
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ctcggcacct	tcgacacagc	cgaggaggcc	gccgcgccta	cgacaccgcc	gcccgcgagt	300
tccgcggcgc	caaggccaag	accaact				327

&lt;210&gt; 1438

&lt;211&gt; 360

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 1438

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tcaaggacct	ccatgaacaa	ggatgaaaaa	ctgggtaatg	cctggaaaac	tcctggcaga	180



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agcattttctt	ctttctaccct	cctttggcag	ggtgcaagtt	caagttttctt	ctcggccagt	300
gggtcccagag	catccagcac	ctggccattg	tcgggcccag	gatcagggaa	ccctacacca	360

&lt;210&gt; 1439

&lt;211&gt; 269

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1439

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acgagcagag	gcactataga	ggagtccggc	ggaggccttg	ggggaagttc	gcggcggaaa	240
tccgagaccc	caaccggaag	ggctcgcgc				269

&lt;210&gt; 1440

&lt;211&gt; 351

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1440

aagaagacga	agcagctcat	ccgaccatgg	tgttggtatt	gcgaacgaga	atttgaagat	60
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gaactgggac	tggcagcagg	atccatttca	cagcctcctg	ccaagcgtca	g	351

&lt;210&gt; 1441

&lt;211&gt; 476

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1441

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&lt;210&gt; 1442

&lt;211&gt; 315

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1442

gcaagnactt	tgaacctggg	aatcatgtna	aggtegtttc	tggtncctaa	gaaggtgcta	60
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aactattacc	gtttttgcag	atgatgttgt	tgagagttca	gaggtaacat	ntggaataac	180
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&lt;210&gt; 1443

&lt;211&gt; 338

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1443

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&lt;210&gt; 1444

&lt;211&gt; 409

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1444

gccaaggcca	caaccatcaa	caccaccacc	agtttgcccg	tgatcattct	tctccctctt	60
cggtcgccat	ggctggtgcg	gcaggggggt	tagagagnga	gaacggcgga	aatgggagat	120
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caagaagacg	aatgaacgaa	aagcgggtag	gcaagacggg	tagcactaca	ggttctttcg	360
tcaagctcga	agctctctac	ggagagaacg	ccaatttgaa	ttccatcct		409

&lt;210&gt; 1445

&lt;211&gt; 304

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1445

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atcatctgat	cactttctggg	acaatggatg	ctgagaaata	ctgtcaacgg	gtgtaaaagg	300
acac						304

&lt;210&gt; 1446

&lt;211&gt; 332

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1446

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gagcagcacc	gtcgacaacg	cctccccctc	gc			332

&lt;210&gt; 1447

&lt;211&gt; 349

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1447

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gctattgggc	ggacaataca	cattgttaac	ctagatcctg	cagcagaga		349

<210> 1448  
 <211> 362  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1448  
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 gc 362

<210> 1449  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1449  
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 tgctcctccc ccgagtcggc gagtgcgccg actcgaaccg cgaatcgccg tctacagagc 180  
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 catagaacca gccacaagaa gcagaagctg atccccggcg g 281

<210> 1450  
 <211> 389  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1450  
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<210> 1452  
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<400> 1452

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&lt;210&gt; 1453

&lt;211&gt; 378

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1453

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&lt;210&gt; 1454

&lt;211&gt; 339

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1454

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&lt;210&gt; 1455

&lt;211&gt; 372

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1455

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&lt;210&gt; 1456

&lt;211&gt; 436

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1456

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<210> 1458  
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<212> DNA  
<213> Eucalyptus grandis

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<212> DNA  
<213> Eucalyptus grandis

<400> 1459  
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<210> 1461  
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<212> DNA  
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<400> 1461

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&lt;210&gt; 1462

&lt;211&gt; 209

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1462

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&lt;210&gt; 1463

&lt;211&gt; 423

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1463

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tca						423

&lt;210&gt; 1464

&lt;211&gt; 379

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1464

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&lt;210&gt; 1465

&lt;211&gt; 334

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1465

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&lt;210&gt; 1466

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<400> 1466  
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 <213> Eucalyptus grandis

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 <212> DNA  
 <213> Eucalyptus grandis

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<400> 1469  
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 <212> DNA  
 <213> Eucalyptus grandis

&lt;400&gt; 1470

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&lt;210&gt; 1471

&lt;211&gt; 530

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1471

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&lt;210&gt; 1472

&lt;211&gt; 381

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1472

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&lt;210&gt; 1473

&lt;211&gt; 567

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1473

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&lt;210&gt; 1474

&lt;211&gt; 423

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis



&lt;400&gt; 1474

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gca						423

&lt;210&gt; 1475

&lt;211&gt; 402

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1475

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&lt;210&gt; 1476

&lt;211&gt; 269

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1476

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&lt;210&gt; 1477

&lt;211&gt; 297

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1477

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&lt;210&gt; 1478

&lt;211&gt; 408

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1478

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408

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<211> 317

<212> DNA

<213> Eucalyptus grandis

<400> 1479

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<210> 1480

<211> 411

<212> DNA

<213> Eucalyptus grandis

<400> 1480

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<210> 1481

<211> 401

<212> DNA

<213> Eucalyptus grandis

<400> 1481

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<210> 1482

<211> 438

<212> DNA

<213> Eucalyptus grandis

<400> 1482

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<210> 1483

<211> 370

<212> DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1483

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&lt;210&gt; 1484

&lt;211&gt; 335

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1484

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&lt;210&gt; 1485

&lt;211&gt; 371

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1485

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&lt;210&gt; 1486

&lt;211&gt; 373

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1486

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&lt;210&gt; 1487

&lt;211&gt; 319

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1487

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 <213> Eucalyptus grandis

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<210> 1492  
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&lt;400&gt; 1492

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&lt;210&gt; 1493

&lt;211&gt; 445

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1493

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&lt;210&gt; 1494

&lt;211&gt; 419

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1494

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&lt;210&gt; 1495

&lt;211&gt; 388

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1495

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&lt;210&gt; 1496

&lt;211&gt; 417

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1496

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&lt;210&gt; 1497

&lt;211&gt; 404

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1497

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&lt;210&gt; 1498

&lt;211&gt; 340

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1498

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aaccctgtcc aaagtcgaat ccactatgcc agttccgctt 340

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&lt;210&gt; 1499

&lt;211&gt; 311

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1499

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311

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&lt;210&gt; 1500

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1500

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<210> 1505  
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 <212> DNA  
 <213> Eucalyptus grandis

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&lt;211&gt; 512

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1506

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&lt;210&gt; 1507

&lt;211&gt; 342

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1507

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&lt;210&gt; 1508

&lt;211&gt; 413

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1508

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&lt;210&gt; 1509

&lt;211&gt; 296

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1509

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&lt;210&gt; 1520

&lt;211&gt; 439

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1520

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&lt;211&gt; 448

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1521

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&lt;210&gt; 1522

&lt;211&gt; 439

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1522

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&lt;210&gt; 1523

&lt;211&gt; 361

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1523

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&lt;210&gt; 1524

&lt;211&gt; 422

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1524

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&lt;211&gt; 443

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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&lt;210&gt; 1526

&lt;211&gt; 379

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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&lt;210&gt; 1527

&lt;211&gt; 419

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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&lt;210&gt; 1533

&lt;211&gt; 417

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1533

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gccgcgtctg	caagcaagtg	aagaaggagg	acaaggaata	tggcgagaga	gaagatcaag	360
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&lt;210&gt; 1534

&lt;211&gt; 574

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1534

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aggcctagaa	gaaataacct	gtgttcttcc	tcgggtccaa	caatcccctt	ccttctctcc	120
tgatccgacc	tcgagccttt	ccctccctgg	tttgactcgc	cgctaccgcc	gccgcccttc	180
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&lt;210&gt; 1535

&lt;211&gt; 497

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1535

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aaaatgtgcc	gaggcctatt	ttccgtctat	ttctcagctt	gaaggattgc	caactcaaag	420
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gaatgtatgt	tctggaa					497

&lt;210&gt; 1536

&lt;211&gt; 454

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1536

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aggtcaggaa	tttgttcaat	ttcactgggtg	ggatggaatt	agggtttgg	gggaatggta	300
acgatcagg	cgagagcgat	cctttcttcg	ctctgggtca	atgatccggc	gggcacggtc	360
gaggtcaaa	acagcgccgt	cgccggcg	ccgcgtcaa	gggttcttcg	aattataacg	420
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&lt;210&gt; 1537

&lt;211&gt; 266

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1537

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aaaaccgaa	tctgggtcgg	ctcctt				266

&lt;210&gt; 1538

&lt;211&gt; 426

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1538

gcatattcta	tatgaagttt	gtccttattt	caaatttgg	tatgtagctg	caaattgggtc	60
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tggttgtct	gtttttgggt	ctgacgttca	tgctgagatg	cttaagattc	ggcctgggga	360
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aagtaa						426

&lt;210&gt; 1539

&lt;211&gt; 447

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1539

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gccggcgaag	aaatacaaaa	aaacccatag	caagaaagcc	caagacggct	ctcagccacg	120
aaggtgcagc	cattgtcttg	tacagaagac	tcctcagtg	agagccggac	ccttgggacc	180
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ccgcccggca	ataagcccca	ctttttttga	gcgaggttca	ctccaatagc	cacagaaaaa	300
tcctcgaaat	gagacgcaa	aaagaagaag	aacaacagag	gccagagcta	acgtcccaga	360
cgtgttcaag	cggcgccaac	gagtcatttt	cagacaattc	tttaccgtct	gaagagtccc	420
ttctagttta	accacaggc	gtgaaat				447

&lt;210&gt; 1540

&lt;211&gt; 382

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1540

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ctacgacacc	ccggaaaaag	ctgcccgtgc	atatgacttt	gccgtgtatt	gcctcagagg	120
gtccaaggcc	aagttcaatt	ttccccactc	tccgccgaaa	ttttcctgcg	cttcatttct	180
atcaccgcag	caaattcaaa	ccgcggcgcc	caagttcgcc	gcagaagaat	tccggcttct	240

ttccgaaaat	ggcgcgcat	cctcatcata	tggtttggaa	aaggntatg	acattaatag	300
cgaacagatt	acttgaagc	agggtgac	atttgggat	tcagtagcat	ttgaaagtat	360
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<210> 1541  
 <211> 368  
 <212> DNA  
 <213> Pinus radiata

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tccagtctgt	ttgacatgac	gccggtgagt	tttttcttcc	tgtcttaaat	tcttgggtgtg	180
gtgggcatgg	aagggtattca	ggaggcgtct	tgggcaaaga	tcccaaaaat	tggatttgca	240
atcaatcatg	attcataatt	gttctgaaaa	ttatgctaag	aactaatctc	atctttcaaa	300
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tttcattt						368

<210> 1542  
 <211> 370  
 <212> DNA  
 <213> Pinus radiata

<400> 1542						
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atatcattga	cctcgagatc	agacaaggcc	ttcagtgagg	cagcttcata	caatcgctag	180
cccacaggcc	tggaggacct	ccgaagctgc	tcaagatcac	agcgatagga	caagacgaga	240
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aagcccacga						370

<210> 1543  
 <211> 404  
 <212> DNA  
 <213> Pinus radiata

<400> 1543						
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cgcaaccaga	tccgacacta	ctactgtcaa	caacggatcc	gctaattggcc	caatagggaag	180
tgctccccc	agaattaact	cgatacaaaa	taataatcca	ggagctgtca	ggcctggctg	240
gggaaccatg	cccttcaca	tgaatcctta	tcatcccaa	tcaatgectc	ttccgcccc	300
caatggtatg	cagggtcagc	ttgtgtgcag	tggatgtaga	actcttcttg	tttatccgca	360
aggtgcacca	aatgtttgct	gtgcagtatg	caacacagtc	actc		404

<210> 1544  
 <211> 339  
 <212> DNA  
 <213> Pinus radiata

<400> 1544						
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aggatagtct	tctgggaaga	tatattcaaa	ctcatggtga	aggcaattgg	aggtctctgc	180
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ttcggccatg	tatcaagcgg	ggaaatatta	caacagatga	agaagaactt	attatcagaa	300
tgcatgctct	cttgggcaac	cgatggtcga	taatagcag			339

<210> 1545  
 <211> 395



&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1545

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atatgattct	ctccgaatac	gttcgaattc	atggcgatgg	tggatggaga	aatcttccgg	180
aaaaagcagg	tcttaagaga	tgtggaaaga	gttgcagact	acgctgggtg	aactatcttc	240
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atcgcttct	tggcaatcgg	tggtcactga	tagcaggacg	actgcctggt	cgaacagaca	360
acgaaatcaa	gaactactgg	aacactcatc	tgagc			395

&lt;210&gt; 1546

&lt;211&gt; 390

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1546

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atgtttacag	aggtatcaga	cagcgcccat	gggaaaaatg	ggctgcggag	attcgagatc	180
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actcgtgttc	tgttaaaaat	gacactagca	agaaattgtc	aggaaaaaga	aggaaagtgt	360
tgctcaaaac	accctgcttt	tggtgttaga				390

&lt;210&gt; 1547

&lt;211&gt; 447

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1547

agggtccccg	cgaaatgact	gaagaggagc	gggagacgaa	gaaggccgcc	agtgtggccg	60
ccacggctgc	cgaccaggag	ctcaggaaga	aagtgtctgc	ggatctgcac	gcgctgatta	120
atcccaacgc	gactggagag	gcggatccgg	cggagtcttc	aggggatgat	gctactgtag	180
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aaaccatggg	atgtattcca	acacctaatg	gagttgttga	ggtgggttcc	acggatttaa	420
atccgcagaa	ctgggatttg	atacaga				447

&lt;210&gt; 1548

&lt;211&gt; 357

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1548

cagaaatctt	gtgatccttg	tgattataat	caaaggctcag	ccttgcaagc	aaccgtgaag	60
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&lt;210&gt; 1549

&lt;211&gt; 395

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1549

gagcactcaa	aatggggaag	acgaagatgg	agattaaacg	cattcaaaac	cctagccgcc	60
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gccaggttac	tttctcgaaa	cgcaagaacg	gatttgctaaa	aaaggcattc	gagctttctg	120
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aagtttaacc	cctgcaaata	ttatattgaa	gggaaatcat	ggtccaaaat	caagtcgcca	360
cccaagttaa	agtgcattgt	aatcacttta	gcttg			395

&lt;210&gt; 1550

&lt;211&gt; 634

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1550

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&lt;210&gt; 1551

&lt;211&gt; 612

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1551

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caaattccca	ta					612

&lt;210&gt; 1552

&lt;211&gt; 562

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1552

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&lt;210&gt; 1553

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 <212> DNA  
 <213> Pinus radiata

<400> 1553  
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 cgtggcctct gacggttaata acgaagaaat tcacgagaaac caagcatctt gcatgttgtt 240  
 ccattttcag actttctttg gattaccagt tcagcccctc caaagccaag ttcaatattg 300  
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 ccgactcatc gcctacattc gagccacagg cgaaggcggc tggcattccc tcccaggggc 180  
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 gataaagaac tattgggata cccactttaa ga 392

<210> 1556  
 <211> 364  
 <212> DNA  
 <213> Pinus radiata

<400> 1556  
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 aaccgcgggg cctggacgaa aacggaggat attattctct ccgaatacat tcgaattcat 180  
 ggcatgggtg ggtggagaag tctcccaaaa aaagcagggc ttaagcgggtg tggaaaagat 240  
 tgtagattac gttggttaaa ctatcttctg cccgacatta aacgcggaga catttcccca 300  
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 gcag 364

<210> 1557  
 <211> 355  
 <212> DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1557

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cgccaagt	ta ctttctcg	aa acgcaaga	ac ggattgcta	aaaaggcatt	cgagctttct	120
gttctctg	cg atgctga	agt cgcccttat	c attttctcg	aaactggcaa	gatcagcgag	180
tttgcaag	cc acaacgac	at ggcaacaata	ctggaaaaat	atcgcatata	cacgcaaa	240
gaaacagat	g gaaacatggg	ggcttcgtcg	gtccaaagcg	tgaagggttg	tgaatcaca	300
ttgaaagcg	t gtcacgagag	gatggacaat	ttgaaaaaaa	aggaacgaaa	catgg	355

&lt;210&gt; 1558

&lt;211&gt; 478

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1558

aaaaagct	gt aaaacggt	at atatagag	cg ctctccagt	c taacatctt	g gattgattgt	60
tttctgtt	ag aaattcccat	catccctctg	tgtcttctc	c cttttgaat	c cagagactgt	120
ttttatgg	tg gctgtaaat	g ctgaaataat	gcccaaatc	g gaagggaag	t ctgcaaatc	180
cctggatt	ca acattcaag	c tgttcggcag	a acgattgct	g gtgaaaaat	c cctgtgatag	240
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caaggctt	ct gaaacgcac	t atcatgatga	g gaaacagaag	c cagaatgagg	a attcagaaaa	360
gggtgggt	aaaa aagcccaca	a agcttgtgcc	c tgcacctcg	c tgcgagagca	t tggataccaa	420
attttgct	at ttcaataact	a ataatgtcaa	c ccagcctcg	c cattattgca	g ggagatgc	478

&lt;210&gt; 1559

&lt;211&gt; 389

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1559

agaagggt	tg aatggcttag	t tccgctcatt	t tgatggcgaa	c cagatctttg	t tggggaggtt	60
cagacttt	ga ttatgaga	ac gaagccgata	c cgagggaagg	t tccatggact	g gtggaagagg	120
acatgcag	ct tggatttg	ta aatttgcacg	g gagaaggacg	c ctggaacttt	c ctgccagag	180
catctggc	ct ccagagaact	g ggtaaagagct	g gccggctaag	g gtgggttaac	t tatctccggc	240
ctgatctc	aa gccggagca	ag atcactcctg	a aagaagaacg	t tttgattatt	g gaactccatc	300
gccgttgg	gg aaataggtg	g tctcgtattg	c caaaaagttt	a accgggaagg	g acggacaatg	360
aaatcaag	aa tttctggaga	a actcgtatg				389

&lt;210&gt; 1560

&lt;211&gt; 354

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1560

agatgcct	cg ggtagcag	tt tacaagagcc	t tgaggagaat	g gatgaagaac	t ttgctcaagc	60
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ctcttacc	ct agaggata	ca ggatctgtgc	t tggttgcaat	c catgagatag	g gctatggg	180
gttttta	agt tgtatggg	ga ccttatggca	t tccagattgt	t ttttgttgtg	t ttgcatgtag	240
tctacc	ata cgtgaacacg	ag agttttccat	g gtcagggaat	g gatccatacc	a aaaaatcctg	300
ttacaagg	aa ctccaccatc	c caaaatgtga	g cgtttgccac	c cagtttatcc	ctac	354

&lt;210&gt; 1561

&lt;211&gt; 248

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1561

gccaggtg	ag gcattggcag	t tcaattttgc	a attccagctg	c catcacatgc	c ctgatgagag	60
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agttgta	aca gttgtggaaa	g gggaaatgaa	c cactaatact	g gctcctttcc	t tccctcggtt	180

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ggaaaacc 248

<210> 1562  
<211> 346  
<212> DNA  
<213> Pinus radiata

<400> 1562  
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gctgaggagg atacaatttt gagtgaacat atcaaaactc atggagtgtg tcgatggaca 180  
tctcttccca agaaagcagg tctaaaacga tctgggaaga gttgcagatt acgttggttt 240  
aactatcttc gttcagatat caagcatgga aacatttctc cggaagaaga ggaactcctc 300  
atcagattac atcgtctcct tggcaatcgt tggtcgttga tagcag 346

<210> 1563  
<211> 354  
<212> DNA  
<213> Pinus radiata

<400> 1563  
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attgagagcg atgatgatat caggagggtt cctgaaatgg gaggaatgca agcagggtcca 180  
tctacatgtg tgcctatgag gttagacaat ccccaaccta gcacaggcgt tgttgccac 240  
aggaagagag ggagagcccc tgcagacaag gaacacaagc gtctcaaaag attgcttagg 300  
aacagagtat ctgcccaca ggcaagagaa agaaagaaag cataacttaa tgat 354

<210> 1564  
<211> 324  
<212> DNA  
<213> Pinus radiata

<400> 1564  
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gggagtggcc caaggctcgc attttggatg gtaatagggg tgggaagattt attgacgata 180  
ggcgtggaag atttaatgac ataatctgta ggacatgcaa cgagccaggg cataccagta 240  
gggagtgcac tgggaattctc atctgccaca acttgtggtg gccgtggaca tgttgcatat 300  
gaatgcccc tctggctcgtg tgat 324

<210> 1565  
<211> 421  
<212> DNA  
<213> Pinus radiata

<400> 1565  
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aactcgaggt ggctgttagt gggaaatgcc atttttatac atgcctccaa ggccatcggg 120  
agtggagaag agatcactat tccttatttt gatgttctgg ctcccttggt acggcgccaa 180  
gctgactgta agaactgggg tttcaagtgc aagtgtgaaga gatgcattct ggagcactca 240  
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aaagaattgc ttgctggatt ggatcatcgg gaaagtgcag aaatgagtca ccgggaaaat 360  
gcagaatttg caatgtttgt tccagaggca gaggagatca tccggagttc ccattgtgtg 420  
a 421

<210> 1566  
<211> 390  
<212> DNA  
<213> Pinus radiata

<400> 1566  
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 aagctcaacg cccccaaatt gtgattcgat gtttccctcc cactacacag cgttggcatt 120  
 gcgtcgccaa atgtggagaa accccagaga gtccggacag agccattccc agcctccaga 180  
 gaaagataga ggaaaaactt tccggccaatt taaggggaatc cgaatgcgaa aatggggaaa 240  
 gtgggtgtcc gaaattcgga tgccgagatc gaaggagagg atctggctag gatcctataa 300  
 aactgtcgag caagccgccc gtgcttacga tgccgcactc tattgcctca gaggaccaa 360  
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<210> 1567  
 <211> 353  
 <212> DNA  
 <213> Pinus radiata

<400> 1567  
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 tgaagcatcc actgagccag tggaggaaga actagtgtatt gaggccaaaa atggagattc 180  
 agggaaatta gaagatgtgg gtagtccagt agaggctgga gaaagtggta gcactagcaa 240  
 ttgcctggga tcatctgtc aagaaaatcg gaaatatgaa tgccaatact gttgcagaga 300  
 gtttgcaaat tcgaggtc tcgggggcca tcaaatgag cacaataaag aga 353

<210> 1568  
 <211> 436  
 <212> DNA  
 <213> Pinus radiata

<400> 1568  
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 aaaggggaag ggagagaaga ggagaacggt gaggggaaaa acccagttga agaggattga 120  
 gaacgggacc agcaggcagg ttactttttg taagcgcagg aacggtctgc tgaagaaagc 180  
 ttacgagctc tcggtgcttt gtgatgccga agtggcactt attgttttct ctccaagagg 240  
 gaagcgctat gagttcgcta atcccagcat gcagaaaatg ttggcacggt acgaaaattt 300  
 ttcagaagga agtaaaagca cgagtacagc aaaagagcaa gatgtccagg gtttaaaacg 360  
 acaaattgag aatatggaag aaagggttga aattcttgaa tccatgcata gaaagatgtt 420  
 gggggatagc tggcat 436

<210> 1569  
 <211> 349  
 <212> DNA  
 <213> Pinus radiata

<400> 1569  
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 ttcaaattccc gcacgatcac actcccttct tttaacattc cgagttcgaa tccccggaaa 120  
 cttctcgaca tggttaagcc ctgcacaaaa cagaatatcc atgtcaatgg caagccggaa 180  
 agccgctcac tgatgtcgcg gcaattcaag ggaatccggc taaggaaatg gggaaaatgg 240  
 gtgtccgaaa ttcgaaatgcc caattgcagg gccaaaattt ggctgggctc ctacgaatcc 300  
 ccagagaaaag ctgcccgcgc ctatgacttt gcagcgtatt gtctgagag 349

<210> 1570  
 <211> 580  
 <212> DNA  
 <213> Pinus radiata

<400> 1570  
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 ggctgagcgg caaaggcgtg agaaattgaa ccagaaattt tatgagcttc gtgccgtgg 120  
 tcctaattgta tcgaaaatgg acaaagcttc tctgctcggc gatgctgctg cttatatcaa 180  
 agatctcttt tccaaacagc aggatattgga gtccgagagg gttgatatgc aggttcaaat 240

tgacactata	aagaaggaat	tattgatgaa	ttctttgaag	ttggcagcta	aagaagcaaa	300
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agaagttcgc	attggtggcc	gagaggcgat	aataagaatt	cagtgtacta	aacataatca	420
tcctgttgcg	agactgatga	tagcactgca	agaacttgat	ttggaagttc	tccatgcaag	480
tatttctact	gtgaaggatt	ccttaattat	ccagacagtc	attgttaaaa	tgaccagagg	540
tttgtacacg	gaagaccaac	ttcacgcctt	gctttgtaag			580

&lt;210&gt; 1571

&lt;211&gt; 469

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1571

gttgacggag	caggcagagc	gcattggtcg	cgtcaagatt	ggcagcaacg	gtttgttgct	60
gttggcgacg	cgggttaaagg	tggcagcatt	tgacctggaa	acacatggga	tttttttcag	120
agtggaagaa	gaagcagatg	atgagattat	cgttgaatct	gtagatgtta	accgggacag	180
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taacaataac	aatagtagaa	aaattccttg	gactttgaat	acatggctgg	catttgtctg	360
cattgacggt	gtggtgcacg	cttgggacgc	tgacagcggc	gcacgactct	accgtttggg	420
agaacaagtc	ggcgatgtgt	tcgatttggg	atcagacaat	gaacacgtg		469

&lt;210&gt; 1572

&lt;211&gt; 337

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1572

gggaggcaga	gaaggaacgg	aaaaaggagt	gaatttttgt	gggtttgtgt	ttattgggaa	60
gatgggggtg	gtgtcgtcca	aggtggagaa	tgaagaatta	gtgaaaagat	gcagggacag	120
gaggaggcta	atgaagcagg	cagtgaattc	caggcacaat	tttgctgcag	cccacattgc	180
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cagtgctatg	aatggcaatg	ctattgaaga	agcgccaca	ccaatgccag	cgaccccat	300
aacagcatct	catcgccatc	ccatgaaatt	ccatcct			337

&lt;210&gt; 1573

&lt;211&gt; 341

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1573

gttctatact	gtcacgggtg	ttcttttaat	ggctcggttc	tcctccctca	ccatggagaa	60
gaatatgtac	tgtagtctca	ctattctgga	gtatgacact	gaggaaggga	gtagtttaga	120
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gagggtactg	gccatgagaa	cccaacaatt	gtgcggcggc	gatgatgcta	ttttgacgaa	300
gaaacagcag	aaaaccaata	tgatatcgat	taagtaccgc	g		341

&lt;210&gt; 1574

&lt;211&gt; 479

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1574

catatcattc	atatgaatat	ggatagcagg	caatcagggg	aagaggaaga	ctgcaacgtc	60
actcgccag	gaggaggagg	aggaatatca	ttacatgtta	gcagcgtgga	atattgccag	120
aagagtgcct	gtgttgccca	tgatatctct	tctgatgaac	aagatctgat	aaatagactt	180
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ttgggttgat	tcagattgtt	taggtttatc	tccacttgaa	aatatgtgtg	gatatttgtt	420

tgtttgtttt atcaaaacca agtatagaag aaataaaatt tgatcgtttt atcgattta 479

<210> 1575  
<211> 402  
<212> DNA  
<213> Pinus radiata

<400> 1575  
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accattggag cagcatctcc cgccaaccag ctttcttctg atggtatggg caacagccat 180  
ggagacaact caacagtatc gccaatctct tatgggttgg acgtaagtgt aagaggcagg 240  
aaaagagggtg gaccgggtgga gaaagtagtt gaaagaaggc agagacgtat gataaagaat 300  
agagaatcgg cagcaaggtc gcgagctaga aaacaggcat ataccggtg aattggaagc 360  
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<210> 1576  
<211> 355  
<212> DNA  
<213> Pinus radiata

<400> 1576  
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<210> 1577  
<211> 463  
<212> DNA  
<213> Pinus radiata

<400> 1577  
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ttgaagaggg tcaggggtcat gaggattttg atcctgctag ccttcgagag catgaggagt 180  
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<210> 1578  
<211> 343  
<212> DNA  
<213> Pinus radiata

<400> 1578  
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aagcatatat tggctaagca aactggcctt acaagaagtc aggtatcaaa ttggtttata 240  
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<210> 1579  
<211> 530  
<212> DNA  
<213> Pinus radiata



&lt;400&gt; 1579

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caatgtggaa	ttcgggaatg	gggaattcag	tgcattctgag	atgaagaaga	tcattggccag	420
tgagaaactg	gcagagcttg	caacggtgga	tccaaaacgt	gtcaaaaagg	atattgggcta	480
atcgccagtc	ggctgcacgc	tccaaggaaa	gaaagatgcg	ctatatctca		530

&lt;210&gt; 1580

&lt;211&gt; 561

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1580

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cgccattatt	acagcgggat	g				561

&lt;210&gt; 1581

&lt;211&gt; 357

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1581

cccagaacgg	cataagcact	gacaaaggat	tttaagatct	gtgcgatgtg	ggatatggat	60
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cctgttcaca	tgaatggtta	gaaaaatcag	gcgctatgca	cggattgaag	caacaat	357

&lt;210&gt; 1582

&lt;211&gt; 522

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1582

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cacaaagcta	agaccaattt	ttctgtcacc	gccgactacc	acaataacgc	tggtgcgccc	360
gcactttcct	ggactcaggg	gctgcattct	cagcagccgg	atctgaacgc	cgcggctttt	420
gctttcgtat	caaacaagag	acgtgaagtt	tcctctggaa	gcgaccggct	cgagttcgaa	480
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&lt;210&gt; 1583

&lt;211&gt; 530

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1583

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&lt;210&gt; 1584

&lt;211&gt; 435

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1584

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gcttcaccat	taccttcac	atccaccaat	ggcgggccga	gattttaatg	acaagaatgc	120
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tctgaacag	ttgaaggtca	tgagcttttg	tggcaatggc	cgaggacata	cattctttaa	360
gcagcatgg	tggatgatg	gaggtaaaat	agaatcgaaa	tacacatcaa	gagcagctga	420
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&lt;210&gt; 1585

&lt;211&gt; 362

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1585

gaaagacttg	cagcttacat	ggtggagggt	cttgctgcac	gaatagcatc	ttcaggaaac	60
ggaatataca	aagctttgaa	ttgtaaaagc	ccaccaagca	ctgatacttt	atctgccatg	120
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ttgcgcataa	ctgcagtaga	tgattctgaa	gatgtaagat	atattcctgg	gggattggat	360
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&lt;210&gt; 1586

&lt;211&gt; 362

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1586

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ga						362

&lt;210&gt; 1587

&lt;211&gt; 389

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1587

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ttcgggaagtc	cggccaccat	gagtctctgc	tccaagtgtt	accgcaatt	cgtgctgctc	300
aactccccta	aatcgctcct	cgataagccg	caacagcagc	tgccgatgca	ggacgaggta	360
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&lt;210&gt; 1588

&lt;211&gt; 416

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1588

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&lt;210&gt; 1589

&lt;211&gt; 507

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1589

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cagggattgt	acggctccag	agcttcccc	tggagacatt	aggctttgca	acaattgtta	120
caaacaagga	catatagctg	ccgagtgtac	gaatgagaag	gcatgcaaca	actgtcgcaa	180
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agggcatacc	agtagggagt	gcactggaat	tctcatctgc	cacaactgtg	gtggccgtgg	420
acatgttgca	tacgaatgcc	cctctggctg	tgtgatgctg	cgggacatgc	gcaggcattg	480
atgctgcagt	ttctacacca	cctgact				507

&lt;210&gt; 1590

&lt;211&gt; 370

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1590

cgatatttta	tgttgttgaa	gttggcaaaa	ggagcattgg	tcttaaaagg	tcaaccctgt	60
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agggcggtgt	agttgaagag	aaggtaattc	ctttatatgg	gaggggtaag	gtgggttctg	360
ctgatccaag						370

&lt;210&gt; 1591

&lt;211&gt; 308

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1591

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cattatta						308

<210> 1592  
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 <212> DNA  
 <213> Pinus radiata

<400> 1592						
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g						361

<210> 1593  
 <211> 378  
 <212> DNA  
 <213> Pinus radiata

<400> 1593						
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ttatcatccc	caaagtaagg	gatggcttga	ctggcctatc	tnaggcagaa	gagaggcatg	240
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<210> 1594  
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 <212> DNA  
 <213> Pinus radiata

<400> 1594						
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cagttgggcg	tccgtgacat	atggagtatt	catttgtctt	gattgttcag	caatgcatcg	180
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gcagttgaaa	ttgatgagct	ttggtggtaa	tggccgtgca	caattattct	ttaagcaaca	300
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<210> 1595  
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 <212> DNA  
 <213> Pinus radiata

<400> 1595						
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<210> 1596  
 <211> 378

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1596

gtcaacgaga attgccacga tgggttaatg tggatttagg tctgggaagc tttaggataa	60
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cagtgcgatg cctgcgagca ggcagctgct tcagtgatat gttgtgcaga cnaggctgct	180
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gcagccatcg ttttctgtct cgaagatcgt gctatgctgt gccaaagactg cgatgagtcc	360
gttcattctc gcgacaca	378

&lt;210&gt; 1597

&lt;211&gt; 387

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1597

tcgataatag caggagagt ccccggccga acagacaacg aaataaagaa ctactggaac	60
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gcacagattg agccaaagtc cagagag	387

&lt;210&gt; 1598

&lt;211&gt; 276

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1598

ggtttgtcag atttgggtgac gagaatgaga aaaaccgagc catgactgaa atgaatgggt	60
tttattgtct ttcaagacct atgcgaatta atgaagctac accaaagaag tccttgggat	120
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tagatccaaa tgcgacagat gaagatctga ggcagg	276

&lt;210&gt; 1599

&lt;211&gt; 374

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1599

cacatcttga gcgaataaaa aatctacgtg atgggtggagc tgggtgctgaa gacagcgacn	60
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agaaagccat gactggattt atgttctttt ctcaagttga aagagagaat ctgaaaaaga	360
gtgacccaag aatg	374

&lt;210&gt; 1600

&lt;211&gt; 334

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1600

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<210> 1601  
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 <212> DNA  
 <213> Pinus radiata

<400> 1601						
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<210> 1602  
 <211> 462  
 <212> DNA  
 <213> Pinus radiata

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<210> 1603  
 <211> 358  
 <212> DNA  
 <213> Pinus radiata

<400> 1603						
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<210> 1604  
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 <212> DNA  
 <213> Pinus radiata

<400> 1604						
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<210> 1605  
 <211> 461

<212> DNA  
<213> Pinus radiata

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<210> 1606  
<211> 463  
<212> DNA  
<213> Pinus radiata

<400> 1606  
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<210> 1607  
<211> 410  
<212> DNA  
<213> Pinus radiata

<400> 1607  
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<210> 1608  
<211> 357  
<212> DNA  
<213> Pinus radiata

<400> 1608  
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<210> 1609  
<211> 222  
<212> DNA  
<213> Pinus radiata

<400> 1609

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aagaaagcta	agcttaactt	taccgatgat	tcatgctcag	ta		222

&lt;210&gt; 1610

&lt;211&gt; 302

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1610

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gg						302

&lt;210&gt; 1611

&lt;211&gt; 268

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1611

gaatgaagtt	agatacggca	aagaaaggcc	ttcctccagg	caccatggga	tggtctctct	60
ttggagaaac	tcttgatttt	ctcagatatg	gtcaacaatt	tatcaaaaac	agaaaggcca	120
gatatggaga	ttgtttcaag	actcacattc	taggatggcc	gacggtgata	tcgacggatc	180
cagctctcaa	cagatatatc	ttattgaatg	aaggccgagg	actaattcct	ggatacccgc	240
agtctatgct	tgacacattg	ggaaaatg				268

&lt;210&gt; 1612

&lt;211&gt; 312

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1612

gctcactgga	ataaacactc	ttcgcaccca	gcccttcaaa	cttcccctct	tggtcccat	60
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ggaataattg	aggaggttg	cagtgaagtg	aaacatctgg	ttcctgggtga	ccgcgtagct	240
ttggagcctg	gaatatcgtg	ttggcgttgt	gaccaatgta	agcgaggctc	ctacaatttg	300
tgtcccagga	tg					312

&lt;210&gt; 1613

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1613

gctggctaca	gcttatgcct	tccgattcgt	gggtgaatgg	atgaaatggc	tataacttga	60
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gctttgtggt	ggacatgggt	acttgtgcag	tagtgggctt	ccagagctgt	ttgctgtata	240
tgttcctgcg	tgacatatg	aaggagataa	cacagttctg	cttctacagg	tagcaagatt	300
cttgatgaag	acagtccaac	aact				324

&lt;210&gt; 1614

&lt;211&gt; 395

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata



<400> 1614  
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 aatttcgaag atggtttagat cttcttgcta ttcaaagcaa ggtcataggg gtgggatttg 120  
 gacccctatg gaggatatga ttctctctga atacattcga attcatggca gtgatggatg 180  
 gaaaaatata gctaaacgag caggctcttaa acgatgtgga aagagttgca gattaccgtt 240  
 gggtgaacta tcttcgcccc gacattaaac gtggtaacat ttctcctgat gaggaggacc 300  
 tcattattag gttgcatggc cttcttggca atcgaggac gactaccggg tcgaacagac 360  
 aacgaaatca agaattactg gcacactcat atgag 395

<210> 1615  
 <211> 231  
 <212> DNA  
 <213> Pinus radiata

<400> 1615  
 ttacattcaa ccaagctcat cacatggcgt ccganaagga agctgctctt gctgccacac 60  
 caccagaaga tgataaacct acaatatattg acnaaatact gcngaaagag attcccaatn 120  
 cagnggttta caaggatgag aaggctactn cnttcaggga tatngcnccc caagcaccta 180  
 ctcacatcat tatcatcccc aaagtaaggg atggcttgac tggcctatct a 231

<210> 1616  
 <211> 396  
 <212> DNA  
 <213> Pinus radiata

<400> 1616  
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 gtagatctcc ttgctgctcc aaagaggggc tcaaccgcgg ggcttgacc aaaagggagg 120  
 atatgattct ctccgaatac gttcgaattc atggcgatgg tggatggaga aatcttccgg 180  
 aaaaagcagg tcttaagaga tgtggaaaga gttgcagact acgctgggtt aactatcttc 240  
 gtcccgatat taaacgcgga aacatttgcc ccgccgagga ggagcttatt attcggtgc 300  
 atcgcttctc tggcaatcgg tggctactga tagcaggacg actgctgggt cgaacagaca 360  
 acgaaatcaa gaactactgg aacactcatc ttgagc 396

<210> 1617  
 <211> 296  
 <212> DNA  
 <213> Pinus radiata

<400> 1617  
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 anaggcgtga ggaagaggcc gtgggggaga ttcgctgcgg aaatcagaga tccctggaag 120  
 aagacgagac tctggctcgg cacttttgac acagccgaag aggcgcgccg cgcctatgat 180  
 aatgccgcca gaaatctacg cggccccaag gccaaaacca atttcgctat ccacgacgat 240  
 agcgcgccgc ctgttcaaca gtggcggcgg acgcgcgcgc cctagtcagc gacaag 296

<210> 1618  
 <211> 381  
 <212> DNA  
 <213> Pinus radiata

<400> 1618  
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 aataataata cagttgtttt cctggaatct attactaatc catctgtcag agttgcggat 120  
 ttaccgtcta ttccactgt atgtaaaaag tatggagcat ttcttatagt agataatata 180  
 tttgctacac cgataaggat caagcccatc aagcagggtg ctgacatggg cattcattca 240  
 gtaacgaaat ttcttggtgg ccatagtgat ctggttgacg gagtagttgc aggtcttctc 300  
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 gattcatggc ttgccactcg c 381

<210> 1619

<211> 373  
 <212> DNA  
 <213> Pinus radiata

<400> 1619  
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 ttctgtgcat cccagcatc ctctcgtgtt gagggacaaa ccagtttcac cacaacgcgt 120  
 atgcgacgtc tgtggaaggg atgttttagg attcgtttat gactgccgtg aatgtgacgt 180  
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 ccacaccctt caactctccc atggacctga agtccccgcc cctcctgcac gctcctgtaa 300  
 cgtatgcgga gaagcctgta gccctgggca ctggagctat cgttgcgaaat tagccagtgc 360  
 gccgtgtgat ttc 373

<210> 1620  
 <211> 137  
 <212> DNA  
 <213> Pinus radiata

<400> 1620  
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 ctccgtgctg tgagaaggct catactaaca aaggggcctg gactaaacaa gaagatgacc 120  
 gccttatcgc tcacatt 137

<210> 1621  
 <211> 372  
 <212> DNA  
 <213> Pinus radiata

<400> 1621  
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 aatttcgaag atggttagat cttcttgcta ttcaaagcaa ggtcataggc gtgggatttg 120  
 gacccctatg gaggatatga ttctctctga atacattcga attcatggca gtgatggatg 180  
 gaaaaaatatc gctaaacgag caggctcttaa acgatgtgga aagagttgca gattacgttg 240  
 gttgaactat cttcgccccg acattaaacg tggtaacatt tctcctgatg aggaggacct 300  
 cattattagg ttgcatggcc ttcttggtcaa tcgcaggacg actaccgggt cgaacagaca 360  
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<210> 1622  
 <211> 464  
 <212> DNA  
 <213> Pinus radiata

<400> 1622  
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 ggagcaggct gcgggttcga tcccaagata aggaaaaaag aaagaaaatt tcatgaattg 120  
 ggccctgtaga ttccagtcac gaaattaaaa cctatcggtc tcgtcttcga gctaaagttg 180  
 gggaaaaagc taagctctca gggaatgggt tccgcacaa tgctgtcctc taatggtggc 240  
 cggacacctc agttccaacc actcgttcgt cagaattctt tatacaattt aacgctggag 300  
 gaggtccaga accagctcgg ggacgccagc aagccactta gcagcatgaa catggacgag 360  
 ctctgaaga acatttggac acaagagaaa gccaggctat atccatggcg atcggcaatg 420  
 ggcccatgaa cgggtgttcct cccaactctg cccctgccag cgggt 464

<210> 1623  
 <211> 436  
 <212> DNA  
 <213> Pinus radiata

<400> 1623  
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 gggtgagatt ctttcatatt tatgcgtaaa acgttgactc caatcggcgt gaaacaaacc 120  
 aatagaaatc ccaaattgat ttctttcaat ttcattctgat acacagagag aattcagtc 180

gtggaagtca	tgtctaacat	aacgtctgcc	tctggagagg	ccagcgtttc	ttctggcaat	240
acagctgcca	tggctgatag	tgagagcatt	cggcaacagc	caccacaaca	attctcaaca	300
ccaacgtctg	caaatggcgc	cggaaatata	aacagtgtc	agcaaaaccc	agagaagaag	360
agaaagagaa	atcttccagg	aactccagac	ccagatgcag	aagtgattgc	tctgtcgctt	420
aggactctca	tggtca					436

&lt;210&gt; 1624

&lt;211&gt; 337

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1624

gccagagctg	tggctgttcc	cagaagagga	tatcatcagc	tgtccagttt	gtcctaagag	60
actacagaag	aagaatatag	aagatgggta	gatccccctg	cccccaaaa	gaagcgctta	120
accgtggggc	ttggacaggc	atggaggata	cgattctcac	cgagtacatt	cgagttcatg	180
gcagtgggtg	ctggaaagat	atctccaaaa	gagcaggtct	taagaggtgt	gcaaagagtt	240
gcagattcgc	ttggctgaac	tatcttcgtc	ccgatattaa	acgtggtaac	atttctcccc	300
aggaagaaga	gctcattatt	cggttgcac	gccttct			337

&lt;210&gt; 1625

&lt;211&gt; 421

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1625

ctgaagtgcc	gtcgattgtt	cgggaggata	gcgttttcga	agttcgttgt	tgagttatct	60
cgcgagactg	tagaatttta	gggttgtttt	ccacaaaccg	acttttcccg	acttcaaata	120
ttgatattga	agtgacatgg	ccggcgagaa	aagaaaagatt	aatagaatag	ctaaccgcttc	180
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ccagtactcc	agctccagca	tgaaaatgat	attggaccag	tatatattgt	attctagatc	360
aattcaaaag	gatggaaagc	caaactctgga	ggagagtcac	gatatccaaa	agataaacca	420
c						421

&lt;210&gt; 1626

&lt;211&gt; 315

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1626

tgcatttcag	ccagtccatg	gtttcaagg	cgaatctcct	tgctgacatg	aatccatcaa	60
tatatataga	gagagagaaa	tatacgtttt	tcagatttaa	gcattggcgt	ttaataatct	120
gcattgcatg	gcgagattgt	atttgtgtta	gaagttgatt	ttctgttttt	tctctttcag	180
ttagttagtc	caataaagca	gagatgggtc	gtgctccatg	ctgcacaaaa	gttgggtctca	240
acaagggagc	atggctctgc	gaagaggata	gtcttctggg	aagatatatt	caaactcatg	300
gtgaaggcaa	ttgga					315

&lt;210&gt; 1627

&lt;211&gt; 373

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1627

cacatccata	catgtgggg	ggacagccgt	tgatgccacc	ttatgggact	ccactacat	60
atcctgcaat	gtatccacat	ggaggaatct	atgcacatcc	ttccatgcct	ccgggtgcac	120
ttccgtatgg	tcaactatga	atgccatcac	ctggcaatgc	tgaagttaca	acgactttag	180
cacttccaaa	tgctgaagca	gaagccaagt	cctcggaagg	caaagagcgg	aatacaatga	240
agagatcaaa	aggaagttaa	ggaagccttg	gaatgattac	tggcaaagga	ggagaagggtg	300
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acggttcaag	cga					373

<210> 1628  
 <211> 512  
 <212> DNA  
 <213> Pinus radiata

<400> 1628  
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 tagagtcttg acaagttggg acaaaggagg gaattccacg gatgttatag atatggatat 120  
 agggactggg agactaacag gttctgaaag gagacatgac aaacggaatc ctacatttac 180  
 agaccattat agacattcag acagtgatcg aatgaagatg aacagctact tatatccaga 240  
 aaacaacaat agcacggcgc ttgtgcgctc tctgtttgtt cccaggaacg acaaacttgt 300  
 aaagattgat ggcaacctta taatccatgc agttctagct ggggaaaaag cctcgagagc 360  
 attatctgcc tcacagtcta gaggcaacaa agatgggcat gtagacacca tttcacttca 420  
 aaaggaatat gaaaagaata gtttggcagt cagaacagaa aggcacgtg ctcttgctgc 480  
 tgctgccgcc gccactacag attcagccag aa 512

<210> 1629  
 <211> 395  
 <212> DNA  
 <213> Pinus radiata

<400> 1629  
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 ccgtaaaatc gcagcgaaaa tccaaaattc caccatgggg actgtggcgg aggatggcag 120  
 caagggttac aaggccgtaa atccccatcc caaaaagggc gtcgcctcgt ggctggtgga 180  
 catggtggag aaactggtgg ttgaaacttc tgcgttgat agttcgaaga agcctctgca 240  
 ttttcttttg gggaacttcg ctccagtctc ggaaactgcc cccaaatcgc acctgcctgt 300  
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 attcgcaccg gtagctggct atcactggtt tgatg 395

<210> 1630  
 <211> 285  
 <212> DNA  
 <213> Pinus radiata

<400> 1630  
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 tgctctgttg tgggcaactt cctagttgct tggatggaga gtctgtgctg gttgggtcca 120  
 atccgaaatt cgcaccggta gctggctatc actggtttga tggagatgga atgatccatg 180  
 gtctcagaat taaagatggt aaagccacat atgtgtcacg ttatgtgaag acatcacgct 240  
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<210> 1631  
 <211> 438  
 <212> DNA  
 <213> Pinus radiata

<400> 1631  
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 aacagagatt ttgtttattt ctgttattag tctgctaaaat tggtttttga taatttaatt 120  
 aattaaggcg ggggcccgcg cctccaggca gtggcggaga ccagtgggcg gccctgccac 180  
 ccgaggagga gagccgctg cgctttctcg acttcgaacc cgcggctatg gaggcgctgg 240  
 atcaggtact ctgctgctg ctcggtgaag ttgctgaagg ccaactgggga gaagccggcg 300  
 gcggcgaaac gggctctcca tggcggagcc ggcggcggag gaaatgggtg cgtcgatctt 360  
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 cagtgaatcg aacaggaa 438

<210> 1632  
 <211> 457  
 <212> DNA  
 <213> Pinus radiata

&lt;400&gt; 1632

ccatatcgaa	acattcacag	ggggagattg	atcaaacaca	aataccgtaa	aatcgagcgc	60
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gtgggtgaaa	cttctgcgtt	gtatagttcg	aagaagcctc	tgcattttct	tttggggaac	240
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agttgcttgg	atggagagtt	cgtgcgcgtt	ggccccaatc	cgaaattcgc	accggtagct	360
ggctatcact	ggtttgatgg	agatggaatg	atccatggtc	tcagaattaa	agatggtaaa	420
gccacatatg	tgtcacgtta	tgtgaagaca	tcacgct			457

&lt;210&gt; 1633

&lt;211&gt; 318

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1633

aattgttgat	aatcagattc	cattgagtgg	acctgattca	gttattggta	gggcacttgt	60
tgtccatgag	ttagaggatg	acctggggaa	aggtgggcat	gaacttagtc	tgacaactgg	120
caatgctggg	ggcaggttgg	cttgtggtgt	ggttggactc	actcccattt	aaggcccagt	180
caaatatgga	atgatcttca	aaggtcatgg	acatcgtatg	aaaccagtga	ctgcaataat	240
aattccaaaa	tatatgttct	ttatcctcgc	aagattgtta	gcaattgtga	tttgtttttg	300
gtattaacga	gttgact					318

&lt;210&gt; 1634

&lt;211&gt; 211

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1634

gccgtggctg	ttcccaggag	aggagagcct	cagctgtctc	gatctggcgt	taaggggtta	60
cagaagaaga	atttcgaaga	tggttagatc	ttcttgctat	tcaaagcaag	gtcataggcg	120
tgggatttgg	accctatgg	aggatatgat	tctctctgaa	tacattcgaa	ttcatggcag	180
tgatggatgg	aaaaatatcg	cttaacgagc	a			211

&lt;210&gt; 1635

&lt;211&gt; 350

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1635

ggtttcttta	tatttatgtg	cagattgcct	ggacggacac	ttgccaatgg	acgtctcata	60
tggctgtgcc	aggccaacga	agcggacagc	aaagtcttcc	cacgtgctct	tcttgctaag	120
agcgcctcta	ttcagactgt	tgtatgcac	cctctcgcg	acggtgtctt	ggagtttgga	180
actactgaag	tggagcgaga	agaccctgg	ctagtccaac	gcaccataag	cttttttttg	240
gagtaccca	aaccgatatg	ttcagagcaa	tctacatcca	gcccacagt	ctcagacaga	300
gacgaaaagg	atcaagtggg	catggtcaca	ataatgtcct	ccgacagcat		350

&lt;210&gt; 1636

&lt;211&gt; 356

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1636

ggttgctgga	ttccaacgga	aaggatttgc	ctctttcatc	agtctataat	cgaggatctc	60
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aggaagaaga	gtttgtcttt	gttgacattc	ctgaaagacc	aattccctct	ctactacgca	180
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ttgcacatga	ttcagatgag	tttaaccgg	gggaggctgg	ccagacattg	gcaagaaaac	300
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<210> 1637  
 <211> 362  
 <212> DNA  
 <213> Pinus radiata

<400> 1637  
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 tgttggtggt ttgggttttc ttggcttttg ccttttcatt ctttggttcc ttggattcga 180  
 actcgagatc tcctgaatat tatggcacag gagagctgga accaggagga gaccgggtgc 240  
 caagtcctcg aagggtcat gcgctgtgcc aacaactgtg gcttcttcgg aagtcgggc 300  
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 tc 362

<210> 1638  
 <211> 359  
 <212> DNA  
 <213> Pinus radiata

<400> 1638  
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 ttggcgtgaa aggtcaaatt tttctctcga gtttcattga ttctgaaaaa ctggcatagc 180  
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 ccccgaggag gacgcgtcgc tgcagaggct tgttcagaaa tacgggccga ggaactggac 300  
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<210> 1639  
 <211> 299  
 <212> DNA  
 <213> Pinus radiata

<400> 1639  
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 tgcagtcgc actggcggaa aggggtacaat gcgaaggaaa aagaagacaa ttcataagac 120  
 tgccacggca gatgacaaga gacttcaaag taccttgaaa agaataggcg tgaataacat 180  
 ccctgctatt gaagaagtca atatttttaa ggatgacctt gttattcatt ttgctaacct 240  
 aaagggtccag gcttctattg ctgccaacac atgggtgggt agtgggcatc gcaaacaaa 299

<210> 1640  
 <211> 300  
 <212> DNA  
 <213> Pinus radiata

<400> 1640  
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 cggcagcggc ggagacgtcg gtggaggaag gaggagaatt gaataagatc gaaagcccta 180  
 caccatcacc aagtcagag aaagctggac tgagcaggag cacaacaaat ttctgcgaag 240  
 ctatgcagcc tgtttgatag ggactggaag aagaattgaa gcatttggtt ggttcacaag 300

<210> 1641  
 <211> 311  
 <212> DNA  
 <213> Pinus radiata

<400> 1641  
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 agcaaagaag aagacgtgag cgcggctgtg gatctggcta tggataagta tgggtcaactc 180  
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<212> DNA  
<213> Pinus radiata

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<211> 322  
<212> DNA  
<213> Pinus radiata

<400> 1643  
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tgaccagctg ttttaagagaa ca 322

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<212> DNA  
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<211> 508  
<212> DNA  
<213> Pinus radiata

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<210> 1646  
<211> 368  
<212> DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1646

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aagattac						368

&lt;210&gt; 1647

&lt;211&gt; 367

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1647

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&lt;210&gt; 1648

&lt;211&gt; 511

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1648

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&lt;210&gt; 1649

&lt;211&gt; 364

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1649

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gccg						364

&lt;210&gt; 1650

&lt;211&gt; 354

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1650



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&lt;210&gt; 1651

&lt;211&gt; 424

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

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gaggtccagg	atgagaaaag	aacagcattt	ggatgaattg	agagcccgaa	cagctcatct	420
cagagcagag	aacagtcata	tgctaacaaa	attcaacatt	gcttcacaga	aatacatgca	424
gctg						

&lt;210&gt; 1652

&lt;211&gt; 422

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

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ttagataaaa	agttgacaca	agcccagctt	gcacagcaaa	tcaatgaaaa	acctcagatt	300
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atgcaatagc	aataacatgt	catagagttg	tgtgatttgg	cgttcaccac	ccacacctgc	422
tt						

&lt;210&gt; 1653

&lt;211&gt; 357

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

<400> 1653						60
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cattaaacgt	ggtaacattt	ctcctgatga	ggaggacctc	attattaggt	tgcatggcct	357
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&lt;210&gt; 1654

&lt;211&gt; 306

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

<400> 1654						60
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tggcagagta	tgatatggag	caattcgatc	gagtgatgaa	cgtaaactg	aaaggagtga	

tgacag

<210> 1655  
 <211> 368  
 <212> DNA  
 <213> Pinus radiata

<400> 1655  
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 gtcaagcaca cgcagccctc agtgtgggtg cggagaaact tgcgcttgcg ccgattgcaa 180  
 gtgtggagtt gtgagtattg cgcctccatc cgaccaaaca agtgggggac atgcatattg 240  
 caagtgtgga gaacactgca gctgcaatcc atgtaactgt tcaaagattg acgagactgt 300  
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 cagagctg 368

<210> 1656  
 <211> 333  
 <212> DNA  
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<400> 1656  
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<210> 1657  
 <211> 355  
 <212> DNA  
 <213> Pinus radiata

<400> 1657  
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<210> 1658  
 <211> 341  
 <212> DNA  
 <213> Pinus radiata

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<210> 1659  
 <211> 353  
 <212> DNA  
 <213> Pinus radiata

<400> 1659

WO 00/53724

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&lt;210&gt; 1660

&lt;211&gt; 317

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

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gagctcccaa	gatacaa 317

&lt;210&gt; 1661

&lt;211&gt; 340

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

<400> 1661	
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gccactatcc	gtttcagtcg gagttcaagg ggtcgcgtgt tcgaatcccg cagagggcat 120
tttcttcgcg	gcctgcagcc cgggcgctga cgcgtcgcgc agaggccaag aaggccgttg 180
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tacatgagtt	tggtgacaca accaatggct gcataatcaac 340

&lt;210&gt; 1662

&lt;211&gt; 563

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

<400> 1662	
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atttcaacgg	ccttataact atttgggaag cagtactctg gatttttctc ccggaacgga 180
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&lt;210&gt; 1663

&lt;211&gt; 572

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

<400> 1663	
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WO 00/53724

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tgagtggacc tgattcagtt attgggaggg cacttgttgt ccatgagtta aaggatgacc	540
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<210> 1664  
 <211> 366  
 <212> DNA  
 <213> Pinus radiata

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tggaact	

<210> 1665  
 <211> 348  
 <212> DNA  
 <213> Pinus radiata

<400> 1665	60
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tgcatactaa tgcccctctg gtcgtgtgat gctgcgggac atgcgcaggc attgatgctg	348
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<210> 1666  
 <211> 422  
 <212> DNA  
 <213> Pinus radiata

<400> 1666	60
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acccaagttg ccagccatgc tcaaaagtac tacattcggc ttggttcgga taataaaaac	240
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cctttactgc acgtttctaa taggcagact aattccccct caacacaggc agaaatgaat	360
cattcaccat gtctgacata tccatctcag atttcacgag gacctctaata aaactctttg	420
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ca	

<210> 1667  
 <211> 467  
 <212> DNA  
 <213> Pinus radiata

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467

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<210> 1668  
<211> 465  
<212> DNA  
<213> Pinus radiata

<400> 1668  
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<210> 1669  
<211> 421  
<212> DNA  
<213> Pinus radiata

<400> 1669  
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aagaatggag agcgacgatt ggaagggaaa gttgttatag taacgggcgg ggcagcgggc 120  
ataggagaag ccattgttca gctgttcgca aagcacggag cgaaagtc atcgcagac 180  
gttgacagaga aagctggcag aaagcttgca gaatccctt ctccagcatc ggcaacttat 240  
gtgactgtg atgtcagcaa agaagaagac gtgagcgcgg ctgtggatct ggctatggat 300  
aagtatggtc aactcgacat tatgtataac aacgctggaa ctaacgacag ctttctgggtg 360  
aagagcgtgg cagagtatga tatggagcaa ttcgacgag tgatgaacgt aaacgtgaaa 420  
g 421

<210> 1670  
<211> 445  
<212> DNA  
<213> Pinus radiata

<400> 1670  
ccatatcgaa acattcacag ggggagattg atcaaacaca aataccgtaa aatcgcagcg 60  
aaaatccaaa attccacat ggggactgtg ggcgaggatg gcagcaaggg ttacaaggcc 120  
gtaaatcccc atccccaaaa gggcgctgcc tctgtggctgg tggacatggt ggagaaactg 180  
gtggttgaaa cttctgcgtt gtatagttcg aagaagcctc tgcattttct tttggggaac 240  
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agttgcttgg atggagagtt cgtgcgcgtt ggtcccaatc cgaaattcgc accggtagct 360  
ggctatcact ggtttgatgg agatggaatg atccatggtc tcagaattaa agatggtaaa 420  
gccacatatg tgtcacgtta tgtga 445

<210> 1671  
<211> 460  
<212> DNA  
<213> Pinus radiata

<400> 1671  
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gcgttcgcgc gcacaaccca gaagtgcag gcatgtgaaa agacgggtcta tttggttgat 180  
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tttgaccagc tgtttaagag aacaggaagt ttggataaaa gttttgaagc cattcctaga 360  
gcatcaagaa atgacaagat gcatgagaat gagaacagga cacctagtag ggtatcagca 420  
ttgttttccg gtacacagga taaatgtgtt gcatgtggga 460

<210> 1672  
 <211> 301  
 <212> DNA  
 <213> Pinus radiata

<400> 1672  
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 tccgaggctg ttgcatcctt aaaagtgttt tacctttgtg gtttggacct tagggtttga 120  
 actctttaa gaaactctca aaatcagcct taaacaataa catacaagat gtccattcta 180  
 ccccaaagcg attccctcat aataaggga gtttgggcag ataactctga ggaggagttt 240  
 gctttgattc gggaaattgt ggacgattac ccttatattg ctatggatac tgagtttcct 300  
 g 301

<210> 1673  
 <211> 321  
 <212> DNA  
 <213> Pinus radiata

<400> 1673  
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 aagatggcag caagggttac aaggccgtaa atcccatcc caaaaagggc gtcgcctcgt 120  
 ggctgggtga catggtggag aaactgggtg ttgaaaactt tgcgttgat agttcgaaga 180  
 agcctctgca ttttcttttg gggaacttcg ctccagtctc ggaaactgcc cccaaatcgc 240  
 acctgcctgt tgttgggcaa cttcctagtt gcttggatgg agagtctgt cgcgttggtc 300  
 ccaatccgaa attcgaccg g 321

<210> 1674  
 <211> 380  
 <212> DNA  
 <213> Pinus radiata

<400> 1674  
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 ttctgcagat gtagaaactc ttcttcctca ggttgatgaa acagcttctg ctgatctgac 180  
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 tccaataaaa atggacgaat gcacagggtt atcccagtta agcctcggcg gtgttcgagc 360  
 ggcttctgca atgaaaccct 380

<210> 1675  
 <211> 350  
 <212> DNA  
 <213> Pinus radiata

<400> 1675  
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 caggaaccag gttgcataat ggctaggcct caaagataca gaggagtccg tcagaggcac 180  
 tggggatcat gggctctctga aatccgccat cccttattga agaccagaat atggctagga 240  
 acatttgaaa cagcagagga tgcagcacga gcatatgatg aagctgcaag gatgatgtgt 300  
 gggccgagag ctagaaccaa cttcccatcc aatcccatgc acctccatct 350

<210> 1676  
 <211> 262  
 <212> DNA  
 <213> Pinus radiata

<400> 1676  
 aagtgaagctt catatctaac caataataac acctgtatag cttcacagca acagggcacc 60

atgggcccag	ctcttgctgt	gataaaatgg	gagtaaaaga	aaggcccctg	gactctaacg	120
aagataaaat	actggtcgac	tacattacca	aacatggcca	tggcaactgg	cgtgcaactgc	180
ccaagcaagc	agggtcctg	cgatgtggaa	agaagttgtc	gcctgcgggg	gacgaattac	240
ctgaaacccg	acatcaaaag	ag				262

<210> 1677  
 <211> 357  
 <212> DNA  
 <213> Pinus radiata

<400> 1677						
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catatggttg	ggatccttcc	aaacggcaga	gatggcggct	cgagcttacg	acgtggctgc	180
gctcagcctg	aaggggaagat	ctgctttgcc	caatttcccg	gattccgtcc	acacgctgcc	240
gcgcccctct	tctctgaatc	ccagagatat	ccagcttggc	ggctgcccag	gcagccgcga	300
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<210> 1678  
 <211> 354  
 <212> DNA  
 <213> Pinus radiata

<400> 1678						
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tgtgattgtt	atgcgggatc	gtgcaactgg	tcgttctcgt	ggatttgggt	atgccacatt	180
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actggaagta	aaggtggcta	caccaagga	ggagatgaag	gtctcttcta	agaagattac	300
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<210> 1679  
 <211> 174  
 <212> DNA  
 <213> Pinus radiata

<400> 1679						
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gatctccttg	ctgctccaaa	gaggggctca	accgcggggc	ctggaccaaa	aggagggata	120
tgattctctc	cgaatacgtt	cgaattcatg	gcgatgggtg	atggaaaaat	gttg	174

<210> 1680  
 <211> 221  
 <212> DNA  
 <213> Pinus radiata

<400> 1680						
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gcttgaggaa	tcactttctc	ccgctgtggc	aacctacgtg	cactgcatg	tgagcaaaga	120
agaagatgtg	agcgcgggcg	tggatgtggc	catggataag	tatggccaac	tggacattat	180
gtataacaac	gctggaacta	atgacagatt	tttggatgaag	a		221

<210> 1681  
 <211> 363  
 <212> DNA  
 <213> Pinus radiata

<400> 1681						
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acagtcacaa	gaacaagccc	gaaggaaaaa	gatgtcccgc	gcacaggatg	gtatactgaa	120
gtacatgctg	aaaatgatgg	aagtttgcaa	agcacaaggt	tttgtatatg	gtatcattcc	180

tgaaaaaggg	aagcctgtaa	gtggagcctc	ggacaatctt	aaagcatggt	ggaaggagaa	240
ggtcagat	gataggaatg	gcctgtctgc	aatcaccaaa	tatcaagcag	aacatgcaac	300
acctggagca	aatgagagta	acatggttgt	ggctcctacc	cctcatactc	ttcaggaact	360
tca						363

<210> 1682  
 <211> 374  
 <212> DNA  
 <213> Pinus radiata

<400> 1682						
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gcagggctcc	gttattgcga	gcaactaaag	ggcgatggtg	ttacaatcaa	atatcgagaa	120
cgagaatgaa	tctgaagcct	ctcggaatgc	tacaaattgg	taatttggct	cctgttagaa	180
gagcattctc	atcacctaga	gcctcagcag	atgaagaagc	tgctgcaaaa	gcagctgctg	240
ctgtagcaga	gacaggagcc	ccaaccatat	ttgacaagat	cataaagaag	gaaattccag	300
caactattgt	ttatgaggat	gcaaaagtgt	tggcatttcg	agatattaat	ccacaggcac	360
cagtccatat	attg					374

<210> 1683  
 <211> 407  
 <212> DNA  
 <213> Pinus radiata

<400> 1683						
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cagaagaaga	atttcgaaga	tgggtagatc	ttcttgctat	tcaaagcaag	gtcatagccg	120
tgggatttgg	acccttatgg	aggatatgat	tctctctgaa	tacattcgaa	ttcatggcag	180
tgatggatgg	aaaaatatcg	ctaaacgagc	aggtaaaatt	ctaatagcaa	tttttattgc	240
aaacgtaata	ctcattgaga	ggttaactaa	gcgggcagtt	tttgttctgc	aggtcttaaa	300
cgacgtggaa	agggttgcag	attacgttgg	ttgaactatc	ttcgccccga	cattaaacgt	360
ggtaacattt	ctcctgatga	ggaggacctc	attattaggt	tgcatgg		407

<210> 1684  
 <211> 361  
 <212> DNA  
 <213> Pinus radiata

<400> 1684						
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atcgctcaca	ttcgagccca	cggcgaaggg	ggctggcggt	ctcttcccaa	ggccgcaggg	180
ctgctgagat	gcggcaagag	ctgcagactg	cgatggataa	actacctgcg	tcccgatctg	240
aagcgtggaa	gcttcacgga	agaagaagac	gaactcatca	tcaaactcca	ctccttcggt	300
ggcaacaagt	ggtctttaat	tgcagggaga	ttgcccgga	ggacggacaa	cgagataaaag	360
a						361

<210> 1685  
 <211> 340  
 <212> DNA  
 <213> Pinus radiata

<400> 1685						
caagagtaaa	cccgaaggaa	tagaagggga	aggaggcatc	ggcagcggtg	ttcctcctcc	60
tctcctctcc	tgcatttctc	aaactcaaat	acctctcctc	tcacaatcat	ggaaggcgga	120
gtcgtctttg	aatctgtgca	aaacccactg	gatcgctga	acactggaaa	tatggaccat	180
ggttgtgccc	attacaggag	acgatgtcgg	attcgggccc	cttggtgcaa	tgagatctat	240
gattgtaggc	actgtcacia	tgaagccatg	agccatctaa	aggaccctt	gctgcgccat	300
gagctcccaa	aatacaaagt	tgaacggggt	atttggctctc			340

<210> 1686



<211> 332  
 <212> DNA  
 <213> Pinus radiata

<400> 1686  
 ggctcttccc ggcagacctt gtaagccgac tactgtaaat ttattctttt agggttacag 60  
 aagaagaaaa tacaagatgg gcagatctcc ttgctgtctc aaagaagggc tcaaccgtgg 120  
 ggcctggacc aaaagggagg atatgattct ctccgaatac attcgaattc atggcgatgg 180  
 cggatggaga aatatgcccc aaagagcagg tcttaaacgg tgtggaaaga gctgcagatt 240  
 acgatggctg aactatcttc gccccgacat taaacgtgga aacatttccc ctgatgagga 300  
 ggaactcata attcggctcc atcgcttct tg 332

<210> 1687  
 <211> 347  
 <212> DNA  
 <213> Pinus radiata

<400> 1687  
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 ctgtggcggg agatggcagc aagggttaca aggccgtaaa tccccatccc aaaaagggcg 120  
 tcgcctcgtg gctgggtggg atgggtggaga aactgggtgt tgaaacttct gcgttgata 180  
 gttcgaagaa gcctctgcat tttcttttgg ggaacttcgc tccagtctcg gaaactgccc 240  
 ccaaatcgca cctgcctgtt gttgggcaac ttctagtgtg cttggatgga gatttcgtgc 300  
 gccgttggtc ccaatccgaa attcgcaccg gtagctggct atcactg 347

<210> 1688  
 <211> 354  
 <212> DNA  
 <213> Pinus radiata

<400> 1688  
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 cagtagggag tgcactggaa ttctcatctg ccacaactgt ggtggccgtg gacatgttgc 120  
 atacgaatgc ccctctggtc gtgtgatgct gcgggacatg cgcaggcatt gatgctgcag 180  
 tttctacacc accttgactt tttagattat ctgattttga caaatctatt ttgaatttgg 240  
 aagttctttt tctgagtagt tagatcagta gacctgtcgt atcagttatt atacagtttt 300  
 cttatactag tcctttactt caagactggc tgatatactt ctattttcat atga 354

<210> 1689  
 <211> 348  
 <212> DNA  
 <213> Pinus radiata

<400> 1689  
 ggagattcct ctctgcaaaa tgcgctggac cttgctcatg gttatctgag ccagattcca 60  
 tcatatggtc atcggaagt tctagtcttg tattcagcac taagcacttg tgatccaggg 120  
 gatatcatgg aaagtataaa gaaatgcaag aattcgaaaa tgcgatgctc agtggttgga 180  
 ttatctgcag aaatttatat ttgcaaacac ctctgtgagg agacgggagg attctattcc 240  
 gtggcacttg atgagtcaca tttcaaggac cttctgcttg aacattgccc tccaccacca 300  
 gccatagcag agtttgcagt tgctagcttg gtcaagatgg gatttcct 348

<210> 1690  
 <211> 349  
 <212> DNA  
 <213> Pinus radiata

<400> 1690  
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 gaaggttacg ctgcgaataa cgatgcagaa cttctgagca aaacccttca agtggaacag 120  
 aagttgttct atttcgatct caaggaaaac ccccgaggtc aataccttaa aatctctgag 180  
 aagacctccg gctcacggtc tacaataatt gtgcccattg gtggagttgc atggttcctc 240

gatctcttta	attattatgt	cgacggagat	gacgaggaag	ttttgagcaa	ggaattgcag	300
ctggatgcc	aggtatttta	tttcgatgtt	ggggtgaata	aaaggggtc		349

<210> 1691  
 <211> 339  
 <212> DNA  
 <213> Pinus radiata

<400> 1691						
ctgaagtgcc	gtcgattgtt	cgggaggata	gcgttttcga	agttcgttgt	tgagttatct	60
cgcgagactg	tagaatttta	gggttggttt	ccacaaaccg	acttttcccg	acttcaaatac	120
ttgatattga	agtgcacatg	cggcgagaa	aagaaagatt	aatagaatag	ctaacgcttc	180
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ccagtactcc	agctccagca	tgaaaatgat	attggacca			339

<210> 1692  
 <211> 380  
 <212> DNA  
 <213> Pinus radiata

<400> 1692						
gaaaccatga	gggtcttgcc	acaaggtttg	ttgagccaca	acctgaatgg	tcagtatttc	60
gtgagggcag	ctttggacat	ggggaactta	gagttgcaa	tgcaacacat	gcacattgga	120
gctggcatcg	taatgatgat	gatgagccag	ttaaactctga	tgaagtttgg	atcaataatc	180
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caccttgagt	atatgcttgg	agggagaagt	gatctaactg	taattgcaa	ggcaaaacac	300
tgagtgtgag	ctcatgcacg	gcaatgaatt	tatggttcag	tgtttagttg	tatggaagta	360
tattattcat	tagacatgca					380

<210> 1693  
 <211> 442  
 <212> DNA  
 <213> Pinus radiata

<400> 1693						
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acgaaatcaa	gaattactgg	aacactcata	tgagcaagaa	gccatggctg	tcaatggacg	420
aatctcagtc	caatacttcg	ca				442

<210> 1694  
 <211> 351  
 <212> DNA  
 <213> Pinus radiata

<400> 1694						
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atgtcaaaat	tgtctgcaac	gcatgctgat	gttgattccc	atgcccagact	acaacatctg	120
cacaaatagg	aagttaagaa	ttaaagcaac	aataaaaagt	ccagccatta	gcagtaaaatt	180
ggcagatata	cctccgatg	attattcgtg	gaggaagtat	ggacaaaagc	caatcaaggg	240
ctcccacat	ccaaggggct	attataagt	cagcagcatg	agaggttctg	ctgcccggaa	300
acatgtggag	cgggtgtccag	atgaaccttc	catgcttatt	gtgacttatg	a	351

<210> 1695  
 <211> 304  
 <212> DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1695

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gaaactgggtg	gttgaaactt	ctgcgttgta	tagttccaag	aagcctctgc	attttctttt	120
ggggaacttc	gctccagtct	cggaaactgc	ccccaaatcg	cacctgcctg	ttgttgggca	180
acttcctagt	tgcttggatg	gagagtctgt	gcgcgttggt	cccaatccga	aattcgcacc	240
ggtagctggc	tatcactggg	ttgatggaga	tggaatgatc	catgggtctca	gaattaaaga	300
tggt						304

&lt;210&gt; 1696

&lt;211&gt; 371

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1696

gcgtggatgt	acaacgaata	tggtatccata	gaggtcctgc	actttgggga	tttccctggt	60
ccaaagcctg	ggtagggcca	gctcttaatt	cgagtcggg	ccgctgctct	taatcctgcc	120
gactttaaga	gacggaaagg	cttattaaga	aacgcggatt	ccgattttcc	gactgtgcc	180
ggctgtgata	tgtcaggagt	ggtggtggaa	attggtgatg	gtgtctccaa	gttcaaggcc	240
ggtgacgaga	tatacagcaa	catccagaat	ttcgagcag	ggaggccaaa	gcagtgcggg	300
actctcgccc	agtacacagt	ggtggaggaa	ttcctggtag	cgccgaagcc	cagtaattta	360
tcatttgagg	a					371

&lt;210&gt; 1697

&lt;211&gt; 523

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1697

ccttcattgga	tatgttggag	ttgattcgcc	accatttgc	ggaagtggag	gacaatatag	60
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gtggcgatta	tattaatatt	gatgatcatg	acgatgatac	ccgagcaaat	gccagagcga	180
ccagggcctc	atgccaaaat	atcgtcagca	gaacaacatt	aaaagagaac	gcgaatgaat	240
ttacacaaca	gatccattct	tcatcttctc	caagatgctc	agttatgaaa	ggagcagagg	300
cgtttcaggt	aaagcaacaa	ccacggggagc	gggagaatgg	aaagaagaga	gagacaagtg	360
ccaggaatta	cagaggagtg	aggcgggcggc	cgtggggaaa	attcacagca	gaaatcagag	420
attccgccc	gaagggtgct	cgggtttggc	ttggaacttt	caacaccgtc	gaagaggctg	480
ctcatgcata	tgaccgcgct	gcctacagat	tccgtggagc	tcg		523

&lt;210&gt; 1698

&lt;211&gt; 471

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1698

cgcatagcc	gagagcacc	ttatctctc	cactctgttt	catacatgca	acaagctctg	60
gcagcagcaa	tggcgcccca	gactatcatc	gctgcctcta	tggcatctcc	tctaacatta	120
tcaaattggc	actatccgtt	tcagtccgag	ttcaaggggt	ccgtgggttcg	aatcccgag	180
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tttcatctac	atgagtttgg	tgacacaacc	aatggctgca	tatcaacagg	agcacatttt	420
aatccaaaaa	aattgacaca	tggtgctcct	gaggatgatg	tacgccatgc	g	471

&lt;210&gt; 1699

&lt;211&gt; 483

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1699

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&lt;210&gt; 1700

&lt;211&gt; 442

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1700

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&lt;210&gt; 1701

&lt;211&gt; 316

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1701

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&lt;210&gt; 1702

&lt;211&gt; 329

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1702

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cacagggtact	ctgatatgca	tgactgctc				329

&lt;210&gt; 1703

&lt;211&gt; 325

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1703

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<210> 1704  
 <211> 453  
 <212> DNA  
 <213> Pinus radiata

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<210> 1705  
 <211> 242  
 <212> DNA  
 <213> Pinus radiata

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<210> 1706  
 <211> 358  
 <212> DNA  
 <213> Pinus radiata

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 aaaagagatg ctgcctccag atgttcgtgt tgcaagagat gctcaggact tactggtcga 300  
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<210> 1707  
 <211> 334  
 <212> DNA  
 <213> Pinus radiata

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<210> 1708  
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 <212> DNA  
 <213> Pinus radiata

&lt;400&gt; 1708

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&lt;210&gt; 1709

&lt;211&gt; 406

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1709

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&lt;210&gt; 1710

&lt;211&gt; 434

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1710

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&lt;210&gt; 1711

&lt;211&gt; 387

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1711

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&lt;210&gt; 1712

&lt;211&gt; 440

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1712

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caacttacgt	gcactgcat	gtgagcaaag	aagaagatgt	aagcgcagca	gtggatgtgg	360
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<210> 1713  
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<210> 1714  
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 <212> DNA  
 <213> Pinus radiata

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 <212> DNA  
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 <212> DNA  
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 <212> DNA  
 <213> Pinus radiata

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&lt;210&gt; 1721

&lt;211&gt; 394

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1721

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&lt;210&gt; 1722

&lt;211&gt; 394

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1722

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&lt;210&gt; 1723

&lt;211&gt; 317

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1723

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&lt;210&gt; 1724

&lt;211&gt; 265

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1724

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&lt;210&gt; 1725

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 <212> DNA  
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 cgtgcactgc ccaagcaagc agggctcctg cgatgtggaa agagttgtcg cctgcggtgg 240  
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 <212> DNA  
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 <212> DNA  
 <213> Pinus radiata

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 <212> DNA  
 <213> Pinus radiata

<400> 1729  
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 gatataattca aactcatggt gaaggcaatt ggaggtctct gcccaagaaa gcagggtgc 180  
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accgatggtc gataatagca gggagagtcc ccg

333

&lt;210&gt; 1730

&lt;211&gt; 508

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1730

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&lt;210&gt; 1731

&lt;211&gt; 411

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1731

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&lt;210&gt; 1732

&lt;211&gt; 390

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1732

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&lt;210&gt; 1733

&lt;211&gt; 277

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1733

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&lt;210&gt; 1734

&lt;211&gt; 221

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1734

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&lt;210&gt; 1735

&lt;211&gt; 316

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1735

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gatttggacc	cctatggagg	atatgattct	ctctgaatac	nttcgaattc	atggcagtga	180
tggatggaaa	aatatcgcta	aacgagcagg	tcttaaacga	tgtggaaaaga	gttgcagatt	240
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aggacctcat	tattag					316

&lt;210&gt; 1736

&lt;211&gt; 464

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1736

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&lt;210&gt; 1737

&lt;211&gt; 361

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1737

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t						361

&lt;210&gt; 1738

&lt;211&gt; 371

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1738

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<212> DNA  
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<210> 1740  
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<212> DNA  
<213> Pinus radiata

<400> 1740  
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<210> 1741  
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<212> DNA  
<213> Pinus radiata

<400> 1741  
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<210> 1742  
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<212> DNA  
<213> Pinus radiata

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&lt;210&gt; 1743

&lt;211&gt; 300

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1743

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&lt;210&gt; 1744

&lt;211&gt; 355

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1744

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&lt;210&gt; 1745

&lt;211&gt; 294

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1745

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&lt;210&gt; 1746

&lt;211&gt; 316

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1746

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&lt;210&gt; 1747

&lt;211&gt; 263

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1747

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<210> 1749  
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<212> DNA  
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<212> DNA  
<213> Pinus radiata

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<210> 1755  
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<212> DNA  
<213> Pinus radiata

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<213> Pinus radiata

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<210> 1757  
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<212> DNA  
<213> Pinus radiata

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&lt;210&gt; 1758

&lt;211&gt; 345

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1758

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&lt;210&gt; 1759

&lt;211&gt; 544

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1759

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&lt;210&gt; 1760

&lt;211&gt; 375

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1760

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&lt;210&gt; 1761

&lt;211&gt; 333

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1761

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333

&lt;210&gt; 1762

&lt;211&gt; 331

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1762

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&lt;210&gt; 1763

&lt;211&gt; 568

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1763

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&lt;210&gt; 1764

&lt;211&gt; 351

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1764

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&lt;210&gt; 1765

&lt;211&gt; 462

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1765

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&lt;210&gt; 1766

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<400> 1766

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<210> 1767  
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 <212> DNA  
 <213> Pinus radiata

<400> 1767

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<210> 1768  
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 <212> DNA  
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<400> 1768

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<210> 1769  
 <211> 407  
 <212> DNA  
 <213> Pinus radiata

<400> 1769

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<210> 1770  
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 <212> DNA  
 <213> Pinus radiata

&lt;400&gt; 1770

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&lt;210&gt; 1771

&lt;211&gt; 469

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1771

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&lt;210&gt; 1772

&lt;211&gt; 461

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1772

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&lt;210&gt; 1773

&lt;211&gt; 332

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1773

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&lt;210&gt; 1774

&lt;211&gt; 322

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1774

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&lt;210&gt; 1775

&lt;211&gt; 428

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1775

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&lt;210&gt; 1776

&lt;211&gt; 512

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1776

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&lt;210&gt; 1777

&lt;211&gt; 498

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1777

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&lt;210&gt; 1778

&lt;211&gt; 435

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1778

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&lt;210&gt; 1779

&lt;211&gt; 470

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1779

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&lt;210&gt; 1780

&lt;211&gt; 359

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1780

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&lt;210&gt; 1781

&lt;211&gt; 360

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1781

cggcccgagc	aatttttgctt	ctctgctaaa	cgatgggaag	agcgccttgc	tgtgccaaacg	60
gtgacagaag	caagggagcc	tggaccaagg	aagaggatga	caggcttacc	caatatattc	120
aggctcatgg	agaaggatgc	tggcggttctc	tccccaaagg	cgcaggtctg	cttcgggtgtg	180
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&lt;210&gt; 1782

&lt;211&gt; 141

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1782

cttctgtgga	ttttatcaag	aactctttaa	ctagtgttga	tgatgataaa	ggttcttttg	60
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tagagcacga	caatgcaaaa	t				141

&lt;210&gt; 1783

&lt;211&gt; 370

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1783

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aattataatc	ctgacagtta	tattttttct	ctctgcatgt	cttcacgttt	taatcagata	240
cttggaaga	tctcccaata	gagactccaa	cagctcaggg	gccatagggtg	caatcgaagg	300
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attaccagtc						370

&lt;210&gt; 1784

&lt;211&gt; 381

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1784

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aatcatggaa	gttgagtgtc	gcagccctcg	gtcttccgct	caggggtgtg	agggtgacat	180
gaagccaacg	atgggtgtgg	aagatacgct	taatcaagga	cgcatgcaat	atggatgttc	240
acactaccgc	cggagatgcc	aaataagggc	tccgtgttgt	aatgaagtct	ttgactgtag	300
gcattgtcat	aatgaggcca	aaaattcaat	ggatgtccat	ccacttgaca	gacatgatgt	360
accgcgccat	gaagttcgaa	a				381

&lt;210&gt; 1785

&lt;211&gt; 441

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1785

cacaggcagc	agataaatatg	aggcacaaga	attcgtgcc	atttcgtttc	tttgcttact	60
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cgaggatttg	gaaaggggtca	t				441

&lt;210&gt; 1786

&lt;211&gt; 435

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1786

caataatgca	ggagtccctc	aattagtgct	caaccottgtg	tttgtcttgg	aattgagcag	60
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gcgggatcga	gtgcgccggc	tagctaaatg	tggccatgtt	ttccatatgg	agtgtttgga	420
taagtggatc	gacta					435

&lt;210&gt; 1787

&lt;211&gt; 323

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1787

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agaaaaagat	gtgagcgcgg	cggtggatgt	ggccatggat	aagtatggcc	aactggacat	180
tatgtataac	aacgctggaa	ctaatagacag	cttttttggtg	aagagcgtgg	tagagtatga	240
tatggagcaa	ttcgcgcgag	tgatgaatgt	aaacgtgaaa	ggagtgatgc	acggcattaa	300
gcacgccgcc	cgcgatga	tcc				323

<210> 1788  
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 <212> DNA  
 <213> Pinus radiata

<400> 1788						
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aggaaattca	caggtcgagg	gtgttgctaa	tctctcgag	gaagacaacg	gtcccacaac	300
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<210> 1789  
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 <212> DNA  
 <213> Pinus radiata

<400> 1789						
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ttgattggag	agaccttgag	cttcattgca	gggattaatt	ccattttctaa	accacgcca	240
ttcattcaag	atcgagagca	aaggatggg	aagatattca	gaacaaattt	gtttggaaga	300
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<210> 1790  
 <211> 337  
 <212> DNA  
 <213> Pinus radiata

<400> 1790						
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cagtacgcag	aaagaagaaa	gcagttcaca	gagccacaac	aacagatgac	aaaaggctcc	240
aaagtacctt	gaagagggtta	ggagtgaata	ctattcctgc	tattgaagaa	gtaaatattt	300
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<210> 1791  
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 <212> DNA  
 <213> Pinus radiata

<400> 1791						
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<210> 1792  
 <211> 376  
 <212> DNA  
 <213> Pinus radiata



&lt;400&gt; 1792

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aatttgacaa	acagcc					376

&lt;210&gt; 1793

&lt;211&gt; 407

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1793

gggaattccc	attctgcaca	tgcaatggac	aatggaatga	tggtatggat	agtttttagca	60
ggggtagtgg	caatggcagt	gtggtatcct	ttggtacagc	accaacagcc	taagcagagc	120
cacaatgttc	cttgggagac	tcttcaccg	ggggctgtgg	gatggccctt	tctcgagag	180
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&lt;210&gt; 1794

&lt;211&gt; 532

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1794

cctgggtgcc	ttcgtcgctc	acttcacaat	caagttgaaa	gtgaaatcaa	tcgatctgaa	60
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cggcagatgt	tgcatgtgat	tcgccaccat	ttgctggaag	aggaagacga	aatggatgtt	180
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caggaggagg	acagtcgaga	gaccatcaaa	gacaggcact	acagaggagt	gaggaagcgg	480
ccatggggta	aattcgcagc	tgaaatcagg	gaccccgcca	cgaagggggc	ca	532

&lt;210&gt; 1795

&lt;211&gt; 502

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1795

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gaaggttacg	ctgcgaataa	cgatgcagaa	ctttgagcaa	aacccttcaa	gtggaacaga	120
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gaaaagatgg	ttgggcagca	tttagaaata	ttttaggaga	gataaatgaa	gcttccaaca	480
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&lt;210&gt; 1796

&lt;211&gt; 476

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1796

cgaaactcga	atcgatatgc	tttgtggccg	gttcaaatat	ttgagcnggc	ttagcttctc	60
tggttcagaa	atggcggact	aaagtaatat	tgtgccccga	ggctctggtg	tcgaatctcg	120
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&lt;210&gt; 1797

&lt;211&gt; 509

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1797

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&lt;210&gt; 1798

&lt;211&gt; 247

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1798

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aagggaattc	acaggtcgag	ggtgtgtgca	gtctctcgca	ggaagacagc	ggtcccacaa	240
cagtga						247

&lt;210&gt; 1799

&lt;211&gt; 147

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1799

tcattattct	tccgcctgtg	aaaagatggg	agatctccgt	gctgtgagaa	ggctcatact	60
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gggaaagggg	ctggcgcttct	cttccca				147

&lt;210&gt; 1800

&lt;211&gt; 361

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1800

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a						361

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 <212> DNA  
 <213> Pinus radiata

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<210> 1802  
 <211> 475  
 <212> DNA  
 <213> Pinus radiata

<400> 1802  
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 acaagtatgg tcaactggac attatgtata acaacgctgg aactaacgac agcgttttgg 420  
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<210> 1803  
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 <212> DNA  
 <213> Pinus radiata

<400> 1803  
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<210> 1804  
 <211> 533  
 <212> DNA  
 <213> Pinus radiata

<400> 1804  
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 ttttcgtcga acaaagccgt gcaccgatct cccagccgt agtccaagcc tcgtcagttc 420  
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<210> 1805  
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<212> DNA  
<213> Pinus radiata

<400> 1805  
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agaacttttg acgaatatgc tggctgatca ggatggcgat ttgaaagagc tagaagcact 300  
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<210> 1806  
<211> 397  
<212> DNA  
<213> Pinus radiata

<400> 1806  
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ctgcagaagg agattcccag tacagtgggt tacgaggatg agaagggtact tgcattcagg 180  
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gcaaaagtta ttgcaaagca ggaaggttta tctgatggct tcagaattgt cattaacgat 360  
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<210> 1807  
<211> 242  
<212> DNA  
<213> Pinus radiata

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tatgcccaa agagcaggtc ttaaacgggtg tggaaagagc tgcagattac gatggctgaa 180  
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tc 242

<210> 1808  
<211> 364  
<212> DNA  
<213> Pinus radiata

<400> 1808  
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gattntaggc actgtcacia tgaagccatg agccatctaa aggaccctt gctgcgccat 300  
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<210> 1809  
<211> 265  
<212> DNA  
<213> Pinus radiata

<400> 1809

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actaatTTTT	tagatggaag	tgatcaatat	gctttcatag	agcaagattt	gaaaaagggt	180
gatagaaaca	agactccatt	tgtagtattt	caaggtcacc	gtcccatgta	tacgactaac	240
tatgaactaa	aagatgcgcc	tctaa				265

&lt;210&gt; 1810

&lt;211&gt; 346

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1810

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agagtctggc	taggcacttt	tgacactgcc	gaagaagctg	ccgagc		346

&lt;210&gt; 1811

&lt;211&gt; 353

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1811

cgaaactcga	atcgatatgc	tttgtggcgc	gttcaaatat	ttgagctggc	ttagcttctc	60
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&lt;210&gt; 1812

&lt;211&gt; 185

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1812

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acccaacac	ctactcacat	cattatcatc	cccaaagtaa	gggatggctt	gactggccta	180
tctaa						185

&lt;210&gt; 1813

&lt;211&gt; 337

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1813

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gctcatcata	tggcgtccga	gaaggaagct	gctcttgctg	ccacaccacc	agaagatgat	180
aaacctacaa	tatttgacaa	aatactgcag	aaggagattc	ccagtacagt	ggtttacgag	240
gatgagaagg	tacttgcatc	cagggatatc	gcacccaac	acctactcac	atcattatca	300
tccccaaagt	aagggatggc	ttgactggcc	tatctaa			337

&lt;210&gt; 1814

&lt;211&gt; 340

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1814

gttcaaggga	gacgggatat	tcagagtccg	atcgccgcca	tggccgtaga	caccatacag	60
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&lt;210&gt; 1815

&lt;211&gt; 433

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1815

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gcctggacca	aagaagaaga	cgagcgtctc	atagcacaca	ttgaagccca	cggcgagggc	180
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gatctcatca	tcaaactcca	ctccctcctc	ggcaacaagt	ggtcgcttat	tgcagggaga	360
ttgccagggc	gaacggacaa	ccgaaaataa	aaaattactg	gaacacgcac	atgaaaagga	420
aattgttgag	cag					433

&lt;210&gt; 1816

&lt;211&gt; 225

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1816

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ttcccaggtt	ttgttaccce	ttatgtacca	tacgggttcc	ccatatggca	cactttttaga	180
cccacaataa	ctcaaacttc	caatgtttat	aagccaacag	ctgta		225

&lt;210&gt; 1817

&lt;211&gt; 337

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1817

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aaagaggccg	aatgcagtca	ggccattggt	gaaaggaggc	ctcgaaacg	gggcagggaag	180
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aagtgaacc	agagggttta	cgcactccgc	gctgtggttc	ccaatgtgtc	caagatggat	300
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&lt;210&gt; 1818

&lt;211&gt; 390

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1818

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ttatatacat	agacacatgg	gggctccgaa	gcagaaatgg	acttccgaag	aggagggagc	180
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<210> 1819  
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 <212> DNA  
 <213> Pinus radiata

<400> 1819  
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 tgatgctgaa gtttcctca tcattttatc tgaaaccgcc aagatttacg agtttgcaag 180  
 caacaagtcg tgactagctc ttgtgaattc ttctgatcaa gttagagatc catatactga 240  
 tatataaaag catactttca cattgcaatt ggagcagatc tagatgcaga agtgcaacct 300  
 tattatacct aaaggccatc agctgcaaat caagacccat tttctatctt ttgagatcgt 360  
 gatacag 367

<210> 1820  
 <211> 487  
 <212> DNA  
 <213> Pinus radiata

<400> 1820  
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<210> 1821  
 <211> 319  
 <212> DNA  
 <213> Pinus radiata

<400> 1821  
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 gatggataaa ctacttgctg ccagttctca gcgtggaaac ttctcagaag aagaagatga 300  
 gttcatcatc aaactccac 319

<210> 1822  
 <211> 320  
 <212> DNA  
 <213> Pinus radiata

<400> 1822  
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 acaacgaaat caagaattac tggaaactc atagagcaa gaagccatgg ctgtcaatgg 300  
 acgaatctca gtccaatact 320

<210> 1823  
 <211> 338  
 <212> DNA  
 <213> Pinus radiata

&lt;400&gt; 1823

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attctatgtt	gggtaacaag	tggcttttga	tgcgaagcaa	attgccaggg	cgaaacagata	300
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&lt;210&gt; 1824

&lt;211&gt; 332

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1824

gccgaggtga	ggaggcatta	cgagcttctt	gttgaggatg	tgactgtgat	tgagtctggc	60
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tcacggacac	ctactcaagt	tgcaagccac	gc			332

&lt;210&gt; 1825

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1825

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cctggactct	agacgaagat	aaaatactcg	tgcattacat	taccaaacat	ggccatggca	180
actggcgcg	actgcccag	caagcaggcg	tctgtcgatg	tggaaagagt	tgctgcctgc	240
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a						301

&lt;210&gt; 1826

&lt;211&gt; 498

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1826

tttgcattcca	attcttcctg	tatcatctaa	ttgctcagtc	tagcaattac	gcaatctcgg	60
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acttacgtgc	gctgcgatgt	gagcaaagag	caagacgtca	gcgctgcggt	ggatttggcc	360
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aatgtttcaa	ggggagtggc	agagtacgag	atggagcagt	tgcaccgagt	tatgagcgtc	480
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&lt;210&gt; 1827

&lt;211&gt; 551

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1827

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&lt;210&gt; 1828

&lt;211&gt; 256

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1828

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ttcagcatgc	agccaccaga	tatgccttgg	gtgaaatccc	tttgatttgc	ccctctctgc	240
aaaatattga	ctcgag					256

&lt;210&gt; 1829

&lt;211&gt; 372

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1829

gcagattctc	aacagaattg	ggaaagtttt	gtgaatattg	aagatggctc	agtgccatga	60
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cgactgectg	ccggatcatc	catggcacca	gttcccgttc	gccggactcg	tggccatggc	360
cggggcaatc	ct					372

&lt;210&gt; 1830

&lt;211&gt; 486

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1830

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&lt;210&gt; 1831

&lt;211&gt; 330

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1831

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<210> 1832  
 <211> 413  
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<400> 1832  
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 aatgctcaca agcgagaacg caccttggca aagagggggc aaagaattgg ggcttttcaa 360  
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<210> 1833  
 <211> 260  
 <212> DNA  
 <213> Pinus radiata

<400> 1833  
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 ctttggaac ccatgggtga agaaatgtat atggaggaac ttagagaggc cgaaacacag 180  
 aatcatgcag cagattcgaa ggtaacaaca gaaagtggct aaaacaatga agaaacgggt 240  
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<210> 1834  
 <211> 338  
 <212> DNA  
 <213> Pinus radiata

<400> 1834  
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 gggctgaaac cctctgggtc ccagagctca gccatgaaa cttcatggca gcagcctatc 180  
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<210> 1835  
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 <212> DNA  
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 tttcattgtt actgagcccg gtgaacttgc aagagggaaa aagaatgggt tagactatct 180  
 ctttgatctt tatgaacagt gcgggaaatt tctgctggat gtgcaacata ttgcgaagga 240

<210> 1836  
 <211> 349  
 <212> DNA  
 <213> Pinus radiata

<400> 1836  
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<210> 1837  
<211> 457  
<212> DNA  
<213> Pinus radiata

<400> 1837  
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aaattttttca agaattggcta attcgaatcg aggatgcttc atatgcgggt ctgaggatca 180  
tcgaaaagcg gactgtccca caccgacaa acttacctgt tatcagtgcg gtggagtggg 240  
ccatcagtct cgggactgct ctctctccga gaagcgcaaa acctgctaca aatgtgggtga 300  
agagggccat atctctcgcg actgttccaa tgcgccaacc tctgagtatt ccggtggtaa 360  
ttccggcacc gaatgttata aatgtggtaa attgggtcat atctctcgcg cctgtccgac 420  
aatgagtca actgctgact atgctagggc tcctagc 457

<210> 1838  
<211> 395  
<212> DNA  
<213> Pinus radiata

<400> 1838  
ctgaaatata gttaaattca ctcttttggg ctcaagttact gcgtcgccaa tatggaaaat 60  
ctccccaatc agcaacctga ccttgaaatt gctcaaacac acgaggatcc cgggtcccgc 120  
caatttaagg gaattcgact gcgaaaatgg ggaagggtggg tatcggaat ccggatacc 180  
aaatctcgag agaaaatatg gctgggctct tacacgactc ccgagcaggc tgcccggtgct 240  
tacgacgcgc cagtgtattg tctgaaaggg cccaacgcca aattcaactt tccggaacc 300  
gtgcacgaca ttccgtctgt gacttctgtt tcccgtcagg aaattcagca cgctccctc 360  
aaatatgcct tgggccagcc cctccgagt ttgca 395

<210> 1839  
<211> 395  
<212> DNA  
<213> Pinus radiata

<400> 1839  
gctaacacag cccttatata tcatcatggg aagcttcttg cacttcaaga ggcagataaa 60  
ccttatgcac ttagagtcct tgaggatggg gatttgcaaa ctcttgggct aatggattat 120  
gataataaat tagcacactc ctctactgca catccaaagg ttgacctgt tacaggggag 180  
atgtttacat ttggttacca acacaagcct ccctatttaa ctaccgggt tggtacaaag 240  
gagggataaa tgcttgatcc agttcctata acacttccca aacctgtcat gatgcatgac 300  
tttgccataa ctgataacta tgcaatcttc atggatcttc ctctctatct ttctccaaag 360  
gatatggtaa aagggtgact catcatgtct tatga 395

<210> 1840  
<211> 468  
<212> DNA  
<213> Pinus radiata

<400> 1840  
ctcatttcag tgattcactc actgaaatta ttgttagaat cactgttttg gccccagagc 60  
ttctgcgtcg ccaaatatgg agatacgct ccagcaggaa aacgaccagg acattgctcc 120  
gccacacgaa gatcgcggtg cccgccaatt taaaggagtc cgaccgcgta aatgggggat 180  
atgggtatcg gaaatccgga tgccgagatc tcgacagaaa atatggctgg gctcgtacaa 240  
aaagcccagag caggccgccc gcgcctacga cgcgcgagtg tattgtctga gagggctcga 300  
cgccaagttc aatttcccca attctgtgcc cgacattccg tctgcgtctt ctcttcccg 360  
ccagcagatt caactcgctg ccgccaataa tgcgttggat cagtccctt caagcccgc 420  
gtctctgaac aataataaag aggaaccgcg gtcaccgtcg cagtcgtc 468

<210> 1841

<211> 378  
 <212> DNA  
 <213> Pinus radiata

<400> 1841  
 aaacaataca gtcgacattg ttgcagcatc tagagctatt cgtgaaccac gtgtagtggt 60  
 acaacaacc agtgaaattg acatccttga tgatggatat cgatggcgca agtatgggca 120  
 gaagggtggtg aaaggaaatc caaatccaag gagttactat aaatgcacaa atgctggatg 180  
 tccagtggagg aaacatgtgg aaagagcatc acatgatcca aaagcgggtga tcacaacata 240  
 tgaaggaaag cataaccatg atgtgcctgc tgccagaaac agcagccatg ataatgctgc 300  
 aaaagggaaat ggggcagctc ctctagcaat gcagaataat gtcccagcgc ctatgaatgc 360  
 tataccacga cctgttcc 378

<210> 1842  
 <211> 382  
 <212> DNA  
 <213> Pinus radiata

<400> 1842  
 ctcccacctc catttcactc tgccgagctc attactctcc ctatcgtcga accacgtctt 60  
 tctcatcgac caacaatgac tcagcagaca acctcaccaa cagttagtcc cgccgcactt 120  
 gctcttccca cttctgcctc atccacatct gcaaagtctg cagctgttcc agtaccagcc 180  
 caagccaacc ctgcgaaacg tcctcgttcg gatctctccg cagaggagaa gcgagaggct 240  
 cgtgctcatc ggaacagaat cgcagctcag aactctcgtg acaaacgcaa acagcagttc 300  
 actagtctcg aacaacgagt catcgacctc gagaacgaga accgccaatt acgagacgct 360  
 ctgcgcactt cgcagccgaa cc 382

<210> 1843  
 <211> 314  
 <212> DNA  
 <213> Pinus radiata

<400> 1843  
 catagaaaga gctttatgtg tcctgaattt gaaccctctc ctcgttttaa agaatccgag 60  
 ctttgcaaac acgccttgag ctagactccg gaatacccca gcaacaatcc gacatggcta 120  
 aatcctcgca aaaccagAAC ccccgcaaca gacgcgaaaa ccgcttacgg aagtcacggc 180  
 agttcaaggg aatacgaatg agaaaatggg ggaaatgggt gtcggaaatt cgaatgcccc 240  
 attccactgg gagaatttgg ctaggctctt atgacacgcc ggaaatgggt gcccgcgcct 300  
 acgattttgc ccgg 314

<210> 1844  
 <211> 384  
 <212> DNA  
 <213> Pinus radiata

<400> 1844  
 ccggttccta gttcgaatcc ttgccctaac gcagtcccggt gttttaagac tcaatcttta 60  
 gtgactcccc cgcaacatgg ttaagccctt gccaaaacag agcagcccga ggggatcgga 120  
 aaactgccaa ataaagtcgc ggcagttcaa aggaatccga ctgagaaaat gggggaaatg 180  
 ggtgtcggaa attagaatgc cgaattccag ggccaaaatc tggctgggct cctacgactc 240  
 cccggaaaaa gctgcccgcg cctacgactt tgcgttgtac tgtctaagag ggtcgaaggc 300  
 cacattcaat tttcccgact ccccgccgga aattccatgc gcctctgacc tgtcgccgcc 360  
 gcaaattcaa gccgcgcggy ccag 384

<210> 1845  
 <211> 171  
 <212> DNA  
 <213> Pinus radiata

<400> 1845  
 acatcccgtc ttcactttgt tgatcaacaa ttacgacaac agcgagctct tcagcagcta 60

ggaatgatac	agcagcatgc	ctggagacca	caaagagggc	ttccagagag	ggccgtttct	120
attctccggg	cttggctatt	tgagcatttc	cttcatccgt	acccccaaaa	t	171

<210> 1846  
 <211> 436  
 <212> DNA  
 <213> Pinus radiata

<400> 1846						
agattgatca	aacacaaata	ccgtaaaatc	gcagcgaaga	tccaaaattc	caccatgggg	60
actgtggcgg	aagatggcag	caaggggttac	acggccgtaa	atccccatcc	caaaaagggc	120
gtcgctcctg	ggctgggtga	catgggtggag	aaactgggtg	ttgaaacttc	tgcgttgtat	180
agttcgaaga	agcctctgca	ttttcttttg	gggaacttcg	ctccagtctc	ggaaactgcc	240
cccaaatacg	acctgcatgt	tgttgggcaa	cttcctagtt	gcttggatgg	agagtccgtg	300
cgcgttggtc	ccaatccgaa	attcgacccg	gtagctggct	atcactgggt	tgatggagat	360
ggaatgatcc	atgggtctgag	aattaaagat	ggtaaagcca	catatgtgtc	acgttatgtg	420
aagacatcac	gcttga					436

<210> 1847  
 <211> 303  
 <212> DNA  
 <213> Pinus radiata

<400> 1847						
ggaggcgagc	cattctttgt	tccccgctcc	tccgatccctg	cggcgccgga	agacgatggc	60
tacatcctca	cattcatgca	caacgaggag	acctcgaagt	cggagcttct	tattttggac	120
gccagatctc	cgaccctgga	acccgtggca	acggtaaagc	tgccgtccag	agtcccatat	180
ggattccacg	gcacattcat	cacttctgaa	gagcttgcca	agcaggtgcc	gtgaagacgc	240
gctgtcttcc	gcccttcttg	ctttcttgat	taccctacaa	cacctgggtc	tgtactttct	300
tta						303

<210> 1848  
 <211> 551  
 <212> DNA  
 <213> Pinus radiata

<400> 1848						
gcgatttcga	gtgctgtaag	caggcaacga	cgcctgtttt	gcttttagagt	ttaacagaaa	60
agaagaatgt	gtggaggtgc	tatcatctcg	gactttataa	taccccctgc	gagccgagggc	120
cgccgggtga	ctgccaggga	tatatggccc	gattttgata	agttctctga	gtttattaat	180
ggagggtgct	cgggtggagtc	ctttgatgtc	agcgttgatg	tcgatgacga	cgaggaggat	240
tccgacgatg	acgagttcct	cgattttgag	gagagctatc	agaacaagaa	gaagaagcag	300
caacagccga	tatcccccac	caaggggttc	gagcttcctt	tagctcgggg	tcttgatgga	360
ccggcggcca	agagcgcggt	gagaaagagg	aagaatttgt	tcagagggat	caggcaacgt	420
ccatggggga	aatgggctgc	agagatcagg	gatcccagaa	aaggcgctag	ggtttggtg	480
ggtaccttta	atacggcgga	ggaagctgct	cgggcttatg	atgcagctgc	acgaaagatc	540
agaggtaaga	a					551

<210> 1849  
 <211> 527  
 <212> DNA  
 <213> Pinus radiata

<400> 1849						
gaacagtcga	gcctcggtgc	accctcctca	gtcaccacaa	acagcactgc	agcgaaagga	60
caagggcctg	ctgatactga	gtctcaacca	gacctaaactg	ctgccgagaa	gccttcaatg	120
gagcccaaga	aaccgccaag	aaagaaagggt	cagaaacgaa	acaggagacc	cagatttgca	180
ttcatgacca	aaagtgatgt	ggatcatttg	gaagatggct	atagatggcg	caaatatggc	240
caaaaggctg	tcaaaaacag	ccctttcccc	aggagttact	atcgttgcac	aaatggaaaa	300
tgctcagtga	agaagagagt	ggagcgttcg	tcagaagatc	cagggaattgt	gattacgaca	360
tatgaaggac	agcattctca	tccaagcccg	gccatattgc	gtgggtcagc	agaatcccaa	420

tcccactttt	cagatcaaag	attgaattct	cccttcactc	aaacgccatt	gatcagattc	480
cctccccacc	caatgatgat	gagtagtact	aaccagggtcc	cagctgc		527

<210> 1850  
 <211> 226  
 <212> DNA  
 <213> Pinus radiata

<400> 1850						
gagagaaggt	ggaagtacag	caatagaaag	tgacttgaaa	agtgaaaatc	ttgaagaaaa	60
agaagcgaag	gcaagtgaaa	atgaagataa	gatgctgaaa	aaaccagaca	aattgttacc	120
ttgtcctcgc	tgtgacagtt	tagataccaa	attctgctat	tacaataatt	acaatgtgaa	180
ccagcctagg	catttctgta	aaaattgcc	gagatattgg	actgct		226

<210> 1851  
 <211> 236  
 <212> DNA  
 <213> Pinus radiata

<400> 1851						
atggccggag	accacgcttg	ccccgtctgc	caagcgactt	ttactcggcc	gcaacatgtc	60
gcacgacaca	tgcgctccca	caccggcgac	cgcccgctaca	agtgtcccat	ctgcaccgac	120
tcgtttggcc	gcagcgacct	cctgaagcga	catgagaaga	agatgcactc	aaacgggcag	180
agcgcagcga	gcacgcccac	tgggccaggg	cagaacaaat	ttgatagcca	gtttac	236

<210> 1852  
 <211> 455  
 <212> DNA  
 <213> Pinus radiata

<400> 1852						
ccacaacgaa	taaattgcaa	tgctgttctg	gatagctgaa	cccaccaact	catcagcata	60
aatttctcca	gcagaaatcc	agcctcccac	tcgcgcgcac	aaatttcttc	aacggaaatc	120
cagccggccg	ctaaattctc	tgactgaca	aaagcccaca	ggctaacaga	ttccgacatg	180
gatcgcccca	ttccctggcc	atctgcatac	acagaaatct	agactttgaa	aatctttcta	240
aattctgtat	ggagccctga	actgtagggt	cagggttcga	ttaccgctat	ggatgaggcc	300
gcgcctgcc	aggtcctctc	cccctgtgac	tactgtggcg	aagcgaatgc	agttctctac	360
tgccgagctg	actccgcca	gctctgctg	ccatgtgacc	accacgtcca	ttctgccaat	420
gcctgtcca	agaagcatgt	ccgatcccag	ctctg			455

<210> 1853  
 <211> 324  
 <212> DNA  
 <213> Pinus radiata

<400> 1853						
cttgaatgtt	gttgcattgt	agggatcaga	aagattggaa	aggccagaaa	cttacaacaa	60
gtggcaggga	cggactcagc	gtgctggatt	tgtacagctt	cctctggatc	gtagtattct	120
ctctaaatcc	agggataagg	taaaaacat	ttctatcata	aggattttgg	agtggacgaa	180
gatggtaatt	ggatgctatt	gggctggaag	ggaagaacta	ttcatgctct	gtctacgtgg	240
agaccttcga	catgatttgg	cgatggagaa	tttttctctc	tgcaaagagt	aaggcatgat	300
acatatttgt	gattctgcca	aggc				324

<210> 1854  
 <211> 316  
 <212> DNA  
 <213> Pinus radiata

<400> 1854						
acgggctctc	caacaattag	gcatgattca	gcagcatgct	tggaggccac	agagaggact	60
tcccagcgca	tctgtttctg	tcttacgggc	ttggctattt	gaacattttc	ttcatccgta	120

tccaaaagat	gcagacaaac	atatgctcgc	gagacagact	gggcttacca	gaaatcaggt	180
ctcaaattgg	tttataaatg	cacgtgtacg	cctctggaag	cctatgggtg	aagagatgta	240
tgtggaggaa	acaaaggagg	cagaagtaga	ccatggatca	aatgataaaa	caggtaagga	300
gagtggcgag	aaaaaa					316

<210> 1855  
 <211> 393  
 <212> DNA  
 <213> Pinus radiata

<400> 1855						
cgaaaaatca	cccccttgcg	ttgcgcacca	tcgccccgac	gtaccgaagt	agcggacacg	60
gttccgtaat	attgtacagg	cgcgcgccca	ccccacagc	gacgacagac	acacattctt	120
taacgatcca	tctccttctt	gacgaaacct	ccacccccaa	cgattgacga	tgcccaaggc	180
ggacagccag	agcggatccc	gagattctac	ggtcgccccc	gctcaaggta	cgctgaagcg	240
gaaccaggcg	tgccaccaat	gtaggaagcg	gaaactgaaa	tgcgacgcca	aaagaccttg	300
ctcgacttgt	gtgaggtcac	acaaccacgc	catcaccac	gctggtccag	acgctgtttt	360
gccgcccttc	ccagaatgta	cctttgacga	agt			393

<210> 1856  
 <211> 359  
 <212> DNA  
 <213> Pinus radiata

<400> 1856						
ggaaagtcca	acatagaaat	cttctgtgca	ttcatagaat	aaatattcta	caggctgcac	60
tgtaatttag	gcgagaaatc	gaataaaata	tacatttggt	tgtttacgat	ggagttggca	120
gatgagcatt	ccatcctccg	ctataagaaa	cccaagctct	ccaagaatgt	cgtttccgag	180
cgccgccgaa	ggcagaaaat	gaacaagctt	ctctacactc	tgagggtctc	ggttcccaat	240
atttccaaga	tggacaaggc	atcgatttta	gcggacgcca	tcgaatatgt	ggagaagctg	300
aagcaacagg	tggagagagc	tgagtctgac	gttcaatcca	ccaacgtctc	ggctctatc	359

<210> 1857  
 <211> 459  
 <212> DNA  
 <213> Pinus radiata

<400> 1857						
ggaaggcaat	gagagtgatc	tcctcaaggg	aatgaagaag	gcaaggcgtg	agagaggatc	60
aacagcaaag	gaacggatta	gtaaaatgcc	tcctgtgtct	gctggaaaac	ggagttctat	120
ctacagaggc	gtcacaaggc	atagatggac	aggacgatat	gaagctcatc	tttgggacaa	180
aagtacttgg	aaccagaacc	aaaataaaaa	gggcaagcaa	gtgtacctag	gtgcctatga	240
tgaggaggag	gctgcagcca	gagcttatga	ccttgccgct	ctgaaatatt	ggggctctgg	300
aactctcatt	aattttcctg	ttagtgacta	tgctagagat	attgaagaga	tgacagacat	360
ttcaaggga	gatttctctg	cttctctcag	acggaaaagt	agtgggtttt	caaggggaat	420
gtcaaaatac	ccgtggactg	gccaaagcaat	cacaaactg			459

<210> 1858  
 <211> 368  
 <212> DNA  
 <213> Pinus radiata

<400> 1858						
aaaaaggcgt	cagaatgggg	tgagtctgta	gtaagtacaa	gcgaaaacag	taatgacttg	60
gatcctccta	cttattctga	aacctcttcc	cctgctcaag	gatctgatcc	tcgggttttc	120
ccctgtaatt	tctgtcaaag	naaattctac	agttctcaag	cattaggagg	tcatacaaat	180
gcccataagc	gtgagagAAC	tttggttaga	agggcacaga	gaatggggtc	ttttgcacaa	240
agatattcaa	gcattggcatc	acttccactc	cacggttcct	cggaaacaag	ttggacgcc	300
agtcggtttt	tagggataaa	agcacattct	ttgattcaca	aacctttccc	tgaaggtgat	360
aacctgcc						368

<210> 1859  
 <211> 497  
 <212> DNA  
 <213> Pinus radiata

<400> 1859  
 ggcaagaccg tctggaagag gatgttacgg gaagagagca aaagcggttac cgtgtctgcg 60  
 acccggaagct ttcggagcga accgtggtag taatgggggc agaccgcac gaatccggag 120  
 tccgtctcgt gcacacgctg atggcctgcg cagaagcggg gcagcgcggt aatttgcca 180  
 tcgcgcgagg aatggtgaaa gaagtgaaga ttctggcttc agcacagggc ggggcaatga 240  
 gcaaggtcgc cacatatatt gccgaggctc ttgcccggcg aatctatggg tttctccctc 300  
 aggacacctt gcggttcaac cagaacgacc ccttgctcga tttctgcaa tttcatttct 360  
 accaaacctg cccctatctc aaattcgcgc acttcatagc caaccaggcc attctggatg 420  
 ccttctccgg gcaccaacag gttcatgtca tagatttcaa tctgaaacag gggatccaat 480  
 ggccggcctt gatacag 497

<210> 1860  
 <211> 254  
 <212> DNA  
 <213> Pinus radiata

<400> 1860  
 gaggtaggag cggcggcgga ggcaagggaa gcccgtagag aggcgtcagg atgagaaaaat 60  
 ggggaaaaatg gggttctgaa gtgagggagc cgaacaagcg gtctcgcata tggctcggct 120  
 cctattccac tcccagggcc gctgccaggg cctatgatac tgccgttttc tacctcagag 180  
 gaccctccgc gactctcaat ttccccaggg aagcacgtaa ggagcagcag agcgacctca 240  
 ggctttcgca gctc 254

<210> 1861  
 <211> 515  
 <212> DNA  
 <213> Pinus radiata

<400> 1861  
 catcttctcc ttacaaaagt agtccccc ttgactccag gcgggtcttcc cagtccataa 60  
 cgatacggat tacacccacg caccatgt ctccacctc atcgatttct tctccctccc 120  
 ctgacacacc atcacagtct gccgctgtgc gcccgacatc taccagagac gattcttccg 180  
 tcatggaacc tccacgtaag cgagccaggg ctgatcttaa cgctgaacag cgaagagagg 240  
 ccagggccca ccgtaatcga attgccgctc aaaactctcg cgataaacgc aaggcgcaat 300  
 tcaattacat ggagcagcgc gtggcacaac tggaggaaga gaaccaacga ctacgagcag 360  
 gcatgggcct ctctcaattc acgccagccg acaacgacaa gtctcgtcagc ctcgagagag 420  
 aatcagtaca ggcccgagag aacagagagc tcaaggagag gatcaagagt ctagagagcg 480  
 ggtggtcggc cgtcatcaaa gcgttgacag cctca 515

<210> 1862  
 <211> 532  
 <212> DNA  
 <213> Pinus radiata

<400> 1862  
 agtttgctgc tctacacctg tgggttgaag cgtttggagc ttcaagaggc aaggtttggt 60  
 ctgtgattaa ttcatggcgg cggcggcgac gactacgttg ggttggtgca aggtggattt 120  
 gatacggctc atgcggctgc gagagcttac gacagggcag ctatcaagtt tcgaggagtt 180  
 gaagctgata taaattttac tctcaccgac tatcaagaag atttagacca gacgagcaag 240  
 ctctctaaag aagagtttgt gcatattctc cgtcgtcaaa gtactgggtt ctctcgtgga 300  
 agttccaagt atagaggcgt taccctgcac aagtgtgggc gatgggaagc cagaatgggt 360  
 caattcctag gaaaaaagta tatatatatt ggattatttg acagtgaaga ggaggctgca 420  
 agggcatatg ataaggctgc tatcagggtc aatggaaagg aggcagtaac gaactttgat 480  
 cctagcttat atgaaaaaga aattcttgaa gaaagaagag agagtcagac tt 532

<210> 1863



<211> 497  
 <212> DNA  
 <213> Pinus radiata

<400> 1863  
 ggcacgagcn cttctgattt tttggccgag ggttcgttgc agaaaggcca agggcaagta 60  
 ggaggcgata gacctacttg aaaatggagg tgtctgcgaa gaagcgaaag gccgaagaag 120  
 cgaatggcgt ggtcgatata gccgtggaag atgctcggaa aatgttggaa cccttcaccc 180  
 gagagcaact attagatatt ctgcaggagg cggcgacgca gcacctggac gtattggagc 240  
 aggtgcgcgc catcgccggac aaggatcctg cgagagaaaa gctgttcgtc cgtggccttg 300  
 gctgggatac aaatacagag tctctcaagg ccctcttttc ccagttcggg gaactggagg 360  
 aaggggtcgt cattatggac aagaacaccg gtaagagtaa gggttacgga ttcgttactt 420  
 tcaagcacat ggacgggtgct cttaatgccc taaaggagcc cagcaagaag atcgacggcc 480  
 gcatgactgt cagtcag 497

<210> 1864  
 <211> 308  
 <212> DNA  
 <213> Pinus radiata

<400> 1864  
 tgcttagatg gagtttacgt ccgaaatgga gcgaatcccc ggttcaaacc ccgaggaggc 60  
 caccatttat ttgacggcga tggaaatgata catgccgtga cgctgcgaca cgggaaggct 120  
 agttacagtt gccgggttcac ggagccccgaa aaggctcatt agcgaggaaac gggcggggcg 180  
 gcagttttac ccgaagccca tcgggcaact ccacggccac ggacgggctg gtgcgcctgc 240  
 tgctgcatgg tgcccggggg ctctgcggga ctggtcaaca ccgggaaggg catgggcgtg 300  
 gctaatac 308

<210> 1865  
 <211> 395  
 <212> DNA  
 <213> Pinus radiata

<400> 1865  
 aagcggtggc agattgttca caatgatttc aagtggcgct ctttcttctg cagcagagat 60  
 tttgaaggca tatcagctgc tcttgggtgc tactcctttc aagaaaatat ctcatatttat 120  
 gacttatcaa acggttctta atgtagcaga gggagaaacg aggttgacac ttgttgattt 180  
 cggaattctg tatggtttcc aatggccttc tctgattcaa tgtctggcaa atcgctctgg 240  
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<210> 1866  
 <211> 340  
 <212> DNA  
 <213> Pinus radiata

<400> 1866  
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 catttctcag gaggacatat ttacaaaacc ctaaaatgca aggagcctac cagttccgaa 300  
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<210> 1867  
 <211> 398  
 <212> DNA  
 <213> Pinus radiata

<400> 1867

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gaatgataca	tgccgtgacg	ctgagacacg	ggaaggctag	ttacagtgtg	cgggttcacgg	360
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&lt;210&gt; 1868

&lt;211&gt; 200

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1868

aattgcaa	attgacag	caatcggt	aatcaatg	agcatctc	atttatcacc	60
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gaaaaa	atggtgcg	gcactttc	gtaggttt	ttaggtgg	taagagacca	180
gcaccagt	tgcggcag					200

&lt;210&gt; 1869

&lt;211&gt; 286

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1869

ggatagtgc	gagcggct	acgtggag	gcacttct	gcagagaaa	taatgggat	60
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tgtgatgg	tcagcggg	tcaaattt	caatttaa	cattatgca	ggagccaag	180
tcgaattc	ctctataa	attgtga	gtattctc	gatgaatc	cggggttt	240
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&lt;210&gt; 1870

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1870

ctatacct	gcctcttg	aatttcagg	tctttctt	tgatttttc	gacagtgt	60
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t						301

&lt;210&gt; 1871

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1871

ggctgcac	ctgtagta	aactttag	aagtggc	agctgaac	ccaggtgg	60
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agaacgtg	gaaaatgg	tgcggaaa	agagaacc	atcgtgga	tcgactgt	240
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a						301

&lt;210&gt; 1872

&lt;211&gt; 447

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1872

aagaaaccta	cttggggcaa	gagctcagcc	catgaaactt	tctgctaaaa	atgattcaaa	60
actgggtatt	gcaaggcctg	ccaagctcta	cagaggagt	agacagaggc	actgggggaa	120
atgggtagca	gagatcagat	tacctaggaa	tagaaccagg	ctctggcttg	gaacttttga	180
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ggcacacagt	gccaacaatg	aagctct				447

&lt;210&gt; 1873

&lt;211&gt; 311

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1873

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aagcctctgc	attttctttt	ggggaacttc	gctccagtct	cggaaactgc	ccccaaatcg	180
cacctgctg	ttgttgggca	acttcctagt	tgcttggtatg	gagagtctgt	gcgcgttggt	240
cccaatccga	aattcgcacc	ggtagctggc	tatcactggg	ttgatggaga	tggaatgatc	300
catggtctca	g					311

&lt;210&gt; 1874

&lt;211&gt; 383

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1874

ttctcgcccg	ttttttccct	gcactcacca	cttccatcgc	cattgctgga	accctagaag	60
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ctatcgattt	attgaaaaaa	atg				383

&lt;210&gt; 1875

&lt;211&gt; 235

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1875

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cctatgatgc	tgccctcttc	tgccctacag	gtcctgctgc	tttctcaac	ttccctgaat	180
ctccacctgc	tcagttttctc	ccatatcccc	tgcgccctct	tcatgatatt	catct	235

&lt;210&gt; 1876

&lt;211&gt; 416

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1876

gattgtatga	gatatcagaa	aataaaaactg	attttaattc	tgcaggcatc	tcagaaaaac	60
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gttttagtac	ttgccagac	atctgagaaa	aacaaaaccg	gttttacttc	tgccgcgggt	240
aaggttttac	aagcttgaat	tcaaacttta	taatcgggcg	ctgtttatat	gtccaacgga	300
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gaagccgtag ggcacccggg agggcagttt gacggaggcc acgacgtcga ggcccc 416

<210> 1877  
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<212> DNA  
<213> Pinus radiata

<400> 1877  
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ggccccagct gtggttacat gcaaggcaga tgcagcagct ttatgtgtag cctgtgatac 300  
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<210> 1878  
<211> 456  
<212> DNA  
<213> Pinus radiata

<400> 1878  
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gggcgcaatg ccgaattcaa cttttctgtc cctgacatc cgactccgtc cccctttcc 360  
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<210> 1879  
<211> 491  
<212> DNA  
<213> Pinus radiata

<400> 1879  
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acgggagc t 491

<210> 1880  
<211> 310  
<212> DNA  
<213> Pinus radiata

<400> 1880  
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ccacctccac cactctctcc tccattgtct ctcacccctt ctctagttg tggatctgca 240  
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tcacatcat 310

<210> 1881  
<211> 251

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1881

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atctctgctc	cggctgcgac	gtcaaagttc	acggcgccaa	caagctggcg	tcgcccacg	240
agaggggtgtg	g					251

&lt;210&gt; 1882

&lt;211&gt; 351

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1882

cacgagggcc	agagctgtgg	ctgttcccg	aagaggatat	catcagctgt	ccagtttgtc	60
ctaagagact	acagaagaag	aatatagaag	atgggtagat	ccccttgccc	cccaaaagaa	120
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&lt;210&gt; 1883

&lt;211&gt; 450

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1883

tcccttatca	cagaatagaa	actgatggct	agtcagattc	cagaatgaac	cctctaaatt	60
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taccgcgccc	cattttcagc	aaaatcccaa	aatctgagta	tgggcaggcg	ttgaacttaa	420
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&lt;210&gt; 1884

&lt;211&gt; 386

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1884

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taccaggtaa	gtgtacccaa	ttcgcc				386

&lt;210&gt; 1885

&lt;211&gt; 190

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1885

aaatgatcag	aggcggttct	ccagttattc	acaacaaaga	aaaggtcccg	cgcttcgggc	60
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cctgtatgac

190

&lt;210&gt; 1886

&lt;211&gt; 412

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1886

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&lt;210&gt; 1887

&lt;211&gt; 329

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1887

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&lt;210&gt; 1888

&lt;211&gt; 101

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1888

aaatgatcag	aggcgttctt	ccagttattc	acaacaaaga	aaagggtccc	cgcttcgggg	60
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&lt;210&gt; 1889

&lt;211&gt; 326

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1889

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&lt;210&gt; 1890

&lt;211&gt; 246

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1890

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246

<210> 1891  
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 <212> DNA  
 <213> Pinus radiata

<400> 1891  
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<210> 1892  
 <211> 349  
 <212> DNA  
 <213> Pinus radiata

<400> 1892  
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 ccataaacga gaacggcgcc gggcaatgac gaggtttcag agatcgccct ctgacagttc 240  
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<210> 1893  
 <211> 417  
 <212> DNA  
 <213> Pinus radiata

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<210> 1894  
 <211> 456  
 <212> DNA  
 <213> Pinus radiata

<400> 1894  
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<210> 1895  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1895

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&lt;210&gt; 1896

&lt;211&gt; 388

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1896

gtaaatcaat	acctggtcag	catcctaatt	tagcattcaa	tgttggcagt	attagatcca	60
accagcagca	gcttcagcaa	cagcatgatc	tgccccctct	ccccaagcca	gcaacaatgc	120
cttttgccctc	ttcagtaagt	atagcaaata	attcccagat	gcctggttta	gggtcaagag	180
gggtaatcag	gatgacagat	gcacccatca	aaagttcctt	agctcaaggt	ggtgggctgc	240
agactggagt	tggcatgact	gggttagaca	ctaggggagt	tgctcttcag	acagtatctc	300
ctgctaacca	tatatctccg	gatgtaatct	ctaggaacac	gatggattcg	tcttcactct	360
caccagttcc	ttatccggtt	ggccgggg				388

&lt;210&gt; 1897

&lt;211&gt; 202

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1897

atgcgaaaca	tgctcaaaca	cccccaacat	catgggaagg	tggaagtggg	gctgattcgg	60
agggttaacat	gttgaaggat	tacgcttcag	aggactggat	tacaggtggt	gaccgcttcc	120
ggttgagctt	ggttgaattt	cttgataagt	tgaataagta	tgccggagtcc	tctgttcata	180
tgtacgtgtc	ccttgaaaag	gc				202

&lt;210&gt; 1898

&lt;211&gt; 289

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1898

gttgaatggg	gattcaaaca	atggcttcac	aaggcggcgg	cggcagcagc	ggtaatgcca	60
gaggtggcgg	tggcaataat	ggaaaatcca	ctgaagttca	gccattgact	cggcagaatt	120
caatatacag	tctcactctt	gatgaggttc	aaaaccagtt	aggtgattta	gggaagccat	180
tgagcagcat	gaacctggac	gagcttttga	agaatgtctg	gacagctgag	gccggtcagt	240
caatgtttat	ggatgttgag	ggcacggctg	tggctaatac	aaatgtct		289

&lt;210&gt; 1899

&lt;211&gt; 477

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1899

cttgaaatcg	ggcgtgcccc	gctcgatcgc	agcttcaagc	agctcaaaaa	gactgtatat	60
cactcgacga	gtgtgctgag	cacattgagc	tcgagctggt	catcaaagcc	gccattggca	120
gtgaagtacc	agctcaaccc	cggctcactc	actgaatcag	atgattcaaa	gagcctctgc	180
tccactctgg	acaagctctt	ggcttgggag	aagaagctct	atgaggaagt	gaaggctaga	240
gaaggtgaga	agatagagca	tgaaaagaag	ttgtcagtag	ttcagagcca	ggaaggcaag	300
ggagaagatg	aaaccaaggt	agacaagacc	aaggcctcat	taaataagtt	gcaagcacta	360
atagctgtta	cgtcggaggc	tgtctctaca	acttcaaagt	caattattgg	cctcagagac	420
agtagacttg	ttcccgagct	tgttgaactc	tgccatgggt	tcatgtacat	gtggagg	477



<210> 1900  
 <211> 1243  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 1900  
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 cctttttcct ccatttggcc aagcagcgcc cgccgcgcga cccgaaggct tccggatctg 120  
 gtgctcggtg ctattccgct cgctcgatagg aggctaggct acgctgaaag aagttgatga 180  
 gcgcaatttc actgatggag tggaaatgcga aacctcctct gcagtgggaa tgggagaatc 240  
 ttatgatgtt cggttcaaaa gcgactgaaa cctctaagcc gctgcgagcg actgattggg 300  
 gaatcgaggg ggaggagctg attgaccccg ggtccttatt tctgtatgag aatgggtggcg 360  
 gcagcagcag ttgtaccagc attgatccgg gttacacttc tgtgtccaag agctcgaaat 420  
 cggcttctgt caattcttcg tctacggacg aattgaaaat ctcgaaattc tctgtggagg 480  
 cgcatgaagg cttttctctg cagagtagca agaaagaatt ggcggtgaat gattttaccg 540  
 gaatgtcacc ggcactcgag ccttcgggtc gctctggtga gccactgctc agtctaaagc 600  
 tcggtaaaaag gatataattt gaaaatacta ttgacaagga tcatgtgaag acccaagacc 660  
 ttcttcgggt catgaaatca cctgatactc cagcaaagag aaacaaatcc aactgtcagg 720  
 gtacgtccgc cccacgctgc caagtgaag gctgtaacct tgacctctct tcagctaaag 780  
 attaccaccg caagcataga gtttgtgaga gtcactctaa atgccctaag gtcactgtca 840  
 gtggtataga gcgtcggttt tgtcagcaat gcagcagggt tcatgggcta tctgagtttg 900  
 atgaaaagaa gcgtagctgt cgcaagcgcc tatctgatca caatgcaaga cgtcgcaagc 960  
 cccgcgcaga tgtgaccag ttgaatccgg ctgactgtc tgcaactgtt tatgggtggg 1020  
 tgcagcagtt gaatccagtc ttgagcagag ctccagctat ccacaccagg tctactgcta 1080  
 gttttaaatg ggcagatata caggacacta agctcataga gaaagggtccg aagcttccaa 1140  
 taggcggagg tgttggtgag tgtatcacta tccaagcaa tgggataccg gacacctca 1200  
 agtccactgg attgggcaaa agctataacg aacttctatc atc 1243

<210> 1901  
 <211> 366  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 1901  
 aaaaagtata tatacctcgg cctatttgat agtgaagtag aggcagcaag ggcgtatgac 60  
 aaggcagcta tcaaatgtaa tggaaagagag gctgtgacca actttgaacc tagtacgtac 120  
 gatggagaga tgattgcaaa agccagcaat gaaaatagca tctatggtga ccatggtctt 180  
 gatctcaatc tcgggatata agcttcttcc aggggaatgg tggaaacctt agagccctcg 240  
 gacgacatgc gtcagggaag tagtttaagg gtaggaaact ctgctgcac ctgggggtgat 300  
 ccatctgttg aaggtttatc gatgacatct ggacaacctc tccttgacgg gtgtttatcc 360  
 taccgt 366

<210> 1902  
 <211> 466  
 <212> DNA  
 <213> *Pinus radiata*

<400> 1902  
 ttaattcatg gcggcgcgcg cgacgactac gttgggttgt gcgaagggtg atttgatacg 60  
 gctcatgcgg ctgcgagagc ttacgacagg gcagctatca agtttcgagg agttgaagct 120  
 gatataaatt ttactctcac cgactatcaa gaagatttag accagacgag caagctctct 180  
 aaagaagagt ttgtgcatat tctccgtcgt caaagtactg gtttctctcg tggagttcc 240  
 aagtatagag gcgttaccct gcacaagtgt gggcgatggg aagccagaat ggggtcaattc 300  
 ctaggaaaaa agtatatata tttgggatta tttgacagtg aagaggaggc tgcaagggca 360  
 tatgataagg ctgctatcag gtgcaatgga aaggaggcag taacgaactt tgatcctagc 420  
 ttatatgaaa aagaaattct tgaagaaaga agagagagtc agactt 466

<210> 1903  
 <211> 240  
 <212> DNA  
 <213> *Pinus radiata*

&lt;400&gt; 1903

gcttattgga	atgcctgaca	ctaactatgg	aagcgaacag	acaaatgctt	gcaaaaaaca	60
gaaaagaata	cgttccaagg	attcaggaga	agatggtgaa	gatagacaga	gagaacatcc	120
tttcattgtt	actgagcccc	gtgaacttgc	aagagggaaa	agaatgggt	tagactatct	180
ctttgatctt	tatgaacagt	gcgggaaatt	tctgctggat	gtgcaacata	ttgcgaagga	240

&lt;210&gt; 1904

&lt;211&gt; 495

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1904

gccatggcaa	tagattttgc	aggacgggaa	tctcctcgtg	tgcaggctcg	cagatacccc	60
attgccaggc	cgagggttgt	aaggcaaaact	tgagcagtg	caaacactac	catcgccggc	120
ataaggtttg	tgaattgcac	tcgaaggctt	ctactgttat	tgtgggtggt	ttcattcagc	180
ggttctgcca	acaatgtagc	agatttcac	caagatctga	attcgacgag	ggaaaacgaa	240
gctgcagaaa	gcgccttgct	gaccacaaca	gacgaaggag	aaaacctcag	ccaagtacat	300
gtgttacatc	acaatctcag	gctggggaaa	caggtttaga	aaatgataac	cagacaacta	360
aaggatcatc	aggtcacatt	acaacggctg	ttcagaatac	accgaacatt	agcagaagca	420
ctagtagtac	tagtccgtcc	ttgattacat	cagtaccgat	gatgatgttc	ccaaataact	480
ataaaggaca	tagtc					495

&lt;210&gt; 1905

&lt;211&gt; 377

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1905

taacactaca	ttcatcaccc	caaacagcaa	acggatcatc	tcgcacaatc	catcaagtgt	60
agatcgaccg	gcggaatctg	cagcactggc	aaagaggatg	aggagggctc	acattcagaa	120
tatagcggga	gattgcaact	tgaaagacag	attacatata	caaagtggaa	tcacatatag	180
tcagcaacaa	agagctccct	tttccacatt	ggcgcagaa	ttccgcacta	gcaattcgcc	240
ccccagcaa	tctgaaagca	acaaaaaaga	agccaccgat	gatgctcatg	gcaccaacgt	300
ccaaggaaca	tttcttaaaa	aggatgatcc	aaaagtact	gctctgattc	aacaagccga	360
gctgctcagt	tccttgc					377

&lt;210&gt; 1906

&lt;211&gt; 377

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1906

gtgattttag	tgtctgatac	tttgaaaagg	gcatcaatac	agtcaaacga	gataaaaaga	60
cataacatgc	aaaactcaat	acatgattct	cagaaaagac	catcatcttt	aattcagtca	120
aacgaggctg	tttttacgca	aacttcggct	ataagctgtg	ccttgcaatc	gtttgttaaa	180
cctccaaatg	ctaagggtcac	ggtcacattc	ctctctgata	tttgagcagc	tcattggcacc	240
aacgtccaag	gaacatttct	taaaaaggat	gatccaaaag	ttactgctct	gattcaacaa	300
gccgagctgc	tcagttccct	tgccgtgaaa	gtcaatgcag	ataacatgga	ccagagtctt	360
gaaaatgctt	ggaaggg					377

&lt;210&gt; 1907

&lt;211&gt; 1668

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1907

agctgtaagc	tacctacgaa	gtggaatcga	agagagagag	agtgagaggc	taactaataa	60
gatgaatatg	aagattcgaa	cctccgacac	cagtactcct	gatgatcagc	aacagcatag	120
cggcgccgtg	aaagtggcga	ttccggccgt	gtcgggggat	tcggggacga	ttgggttaaa	180
gctgggcaag	cggacctatt	ttgaggcggt	gaaggcaatt	ccgacagcga	tccctcgcgc	240

gtcttgcgtt	cgggctgcc	agaagcagca	gtctgcgttg	cagggaaacgc	atatggtgcc	300
gcggtgtcag	gtggaggat	gcgagatgga	actcaccgcc	gcaaaggact	accaccgccg	360
ccacaaggtc	tgcgagctcc	actccaagtt	tcccaaggtc	atcgtcaacg	ggatcgagca	420
gcgcttctgt	cagcaatgta	gcaggtttca	tacgttgtct	gagtttgatg	aaggggaagcg	480
gagctgtcgg	aggcgtctag	ctggccacaa	ccagcggcgt	aggaaacccc	aacttaattc	540
aacggcgatg	aaagctgcaa	gatttgcttc	cactttctat	gatgacgggc	gacttagcag	600
catcctgatg	gctagatcac	ctttcatgca	tccacggata	gcttcaaact	tggaggagaa	660
ttcgctcgat	ttcaaacttg	gaggatatgg	aaaaggagct	tggccgagga	ttaaggctga	720
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caacaggtgg	gttccctgca	gctactgtga	attctatgga	taagcagcac	caaggtcatc	1260
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tgcaccaggg	aagtaaacag	tttactgact	tgcagttggt	gaggtctttt	gaatcatcta	1500
tttatgacac	tcatcaactg	ctgtagctct	aatctgggtg	ttcttccggc	atgttttctt	1560
tgcctcaga	cttgaagata	actgttaaaa	cttcattatg	acaattatct	gtaccctcta	1620
aatgcagaca	attgctttca	attacccttg	cttattttcaa	aaaaaaaa		1668

&lt;210&gt; 1908

&lt;211&gt; 821

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1908

ctctctctct	ctctctctct	ctctttcttt	ctttctttct	ctctctagca	gaggcacaga	60
ggcgcgagca	gggcactgat	gatgacgact	gggtagctc	caatgaatgg	gctctagaga	120
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ccccctctcg	ataatcctca	cggcctcaag	ttcggccaga	aaatctactt	ccagaataat	240
aacagttagta	ataatgccgc	cgcaaccga	aacggctcgc	gctccgggtc	cggtcctcc	300
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ggcgccggcg	gctgcggggc	gatccagggc	gggcagcccc	cgagggtcca	ggtggaaggc	420
tgcggggtgg	atctgagcga	tgccaaggct	tactattcca	ggcacaagggt	gtgcggcatg	480
cactccaagt	ccgccaccgt	catcgctgcc	ggcatcgagc	agaggttctg	ccagcagtg	540
agcagattcc	atcagcttac	tgaatttgac	caagggaac	gaagctgtcg	tagacgtttg	600
gctggtcaca	atgagcgccg	gaggaagccc	ccacctgggt	cgctactatc	ctctcgctat	660
ggcgactgc	aatcctctat	atttgagaac	accaccagag	tgggtagttt	tctgatggat	720
ttcacagcat	acccgaagca	tgcattggtca	gcgccacgtt	tttctgagcg	cacgacacct	780
ggagatctag	tccccggacc	aggaaaggct	tatcctcatc	c		821

&lt;210&gt; 1909

&lt;211&gt; 105

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1909

gggaagagga	gcgtagagt	ggattcgaac	gattggaagt	gggacggtga	tctgttcgtc	60
gctaggccgc	tgaaccgggt	cccgctcgat	ttccccggcc	ggcag		105

&lt;210&gt; 1910

&lt;211&gt; 338

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1910

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cagaagagac ctgccatgga aacacatttt gcaggacaga aatttcatca ttcacaggct      60
cacagatacc ccagtgccag tccgaggggt gtaaaagcaaa cttgagcagt gccaaacact      120
accatcgccg acataaagtt tgcgaattcc actctaaggc tcctacggtc gttgttggcg      180
gtcagattca gcggttttgc caacagtgtg gtagatttca tcagacatct gaatttgacg      240
gaggaaagcg gagctgcaga aagcgcttg ctgaccacaa cagacgccgg cggaaaccta      300
aaccgagtca atgtactaca tccaatgtc aggcaggg      338

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<210> 1911  
 <211> 465  
 <212> DNA  
 <213> Pinus radiata

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<400> 1911
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attcacattg cctctccatc tcttccaatc aggattccag aattgcccgt cgaaatggat      120
gaagtccaag tcaagggtcga cattcagagc acaaatgtca gtgccgacga gccaggcct      180
gcgaagcgcc agggtttctga gctcgccaag agccctgaaa acgtggcttc gaaatccact      240
gcgctctcct ctccgaaaaa acccaaagct gcttcttctt cttcttcttc gtcgccgaga      300
gcgcagcctc ccgcttgcca ggtggagaaa tgcgcggcgg atcttgctga tgccaaagag      360
tactatagga ggcacagggt ttgcgagcaa cattcaaagg ctgcaattgt gctcgttctt      420
ggcctccagc aacgcttctg ccagcaatgt agcagattcc atgtg      465

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<210> 1912  
 <211> 509  
 <212> DNA  
 <213> Pinus radiata

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<400> 1912
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ggattacacc cagcacccc atgtcttcca cctcatcgta ttcttctccc tcccctgaca      120
caccatcaca gtctgccgct gtgcgcccga catctaccog agacgattct tccgtcatgg      180
aacctccacg taagcgagcc agggctgatc ttaacgctga acagcgaaga gaggccaggg      240
cccaccgtaa tcgaattgcc gctcaaaact ctgcgcgataa acgcaaggcg caattcactt      300
acatggagca gcgcgtggca caactggagg aagagaacca acgactacga gcaggcatgg      360
gcctctctca attcacgcca gccgacaacg acaagttcgt cagcctcgag agagaatcag      420
tacaggcccg cgagaacaga gagctcaagg agaggatcaa gagtctagag agcgggtggg      480
cggccgtcat caaagcgttg caggcctca      509

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<210> 1913  
 <211> 151  
 <212> PRT  
 <213> Pinus radiata

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<400> 1913
Glu Gly Asn Glu Ser Asp Leu Leu Lys Gly Met Lys Lys Ala Arg Arg
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Glu Arg Gly Ser Thr Ala Lys Glu Arg Ile Ser Lys Met Pro Pro Cys
          20           25           30
Ala Ala Gly Lys Arg Ser Ser Ile Tyr Arg Gly Val Thr Arg His Arg
          35           40           45
Trp Thr Gly Arg Tyr Glu Ala His Leu Trp Asp Lys Ser Thr Trp Asn
          50           55           60
Gln Asn Gln Asn Lys Lys Gly Lys Gln Val Tyr Leu Gly Ala Tyr Asp
          65           70           75           80
Glu Glu Glu Ala Ala Ala Arg Ala Tyr Asp Leu Ala Ala Leu Lys Tyr
          85           90           95
Trp Gly Pro Gly Thr Leu Ile Asn Phe Pro Val Ser Asp Tyr Ala Arg
          100          105          110
Asp Ile Glu Glu Met Gln Ser Ile Ser Arg Glu Asp Phe Leu Ala Ser
          115          120          125
Leu Arg Arg Lys Ser Ser Gly Phe Ser Arg Gly Met Ser Lys Tyr Arg

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130 135 140  
 Gly Leu Pro Ser Asn His Lys  
 145 150

<210> 1914  
 <211> 128  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 1914  
 Lys Ser Ile Pro Gly Gln His Pro Asn Leu Ala Phe Asn Val Gly Ser  
 1 5 10 15  
 Ile Arg Ser Asn Gln Gln Gln Leu Gln Gln Gln His Asp Leu Pro Leu  
 20 25 30  
 Leu Pro Lys Pro Ala Thr Met Pro Phe Ala Ser Ser Val Ser Ile Ala  
 35 40 45  
 Asn Asn Ser Gln Met Pro Gly Leu Gly Ser Arg Gly Val Ile Arg Met  
 50 55 60  
 Thr Asp Ala Ser Ile Lys Ser Ser Leu Ala Gln Gly Gly Gly Leu Gln  
 65 70 75 80  
 Thr Gly Val Gly Met Thr Gly Leu Asp Thr Arg Gly Val Ala Leu Gln  
 85 90 95  
 Thr Val Ser Pro Ala Asn His Ile Ser Pro Asp Val Ile Ser Arg Asn  
 100 105 110  
 Thr Met Asp Ser Ser Ser Leu Ser Pro Val Pro Tyr Pro Phe Gly Arg  
 115 120 125

<210> 1915  
 <211> 66  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 1915  
 Ala Lys His Ala Gln Thr Pro Pro Thr Ser Trp Glu Gly Gly Ser Gly  
 1 5 10 15  
 Ala Asp Ser Glu Val Asn Met Leu Lys Asp Tyr Ala Ser Glu Asp Trp  
 20 25 30  
 Ile Thr Gly Val Asp Arg Phe Arg Leu Ser Leu Val Glu Phe Leu Asp  
 35 40 45  
 Lys Leu Asn Lys Tyr Ala Glu Ser Ser Val His Met Tyr Val Ser Leu  
 50 55 60  
 Glu Lys  
 65

<210> 1916  
 <211> 89  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 1916  
 Met Ala Ser Gln Gly Gly Gly Ser Ser Gly Asn Ala Arg Gly Gly  
 1 5 10 15  
 Gly Gly Asn Asn Gly Lys Ser Thr Glu Val Gln Pro Leu Thr Arg Gln  
 20 25 30  
 Asn Ser Ile Tyr Ser Leu Thr Leu Asp Glu Val Gln Asn Gln Leu Gly  
 35 40 45  
 Asp Leu Gly Lys Pro Leu Ser Ser Met Asn Leu Asp Glu Leu Leu Lys  
 50 55 60  
 Asn Val Trp Thr Ala Glu Ala Gly Gln Ser Met Phe Met Asp Val Glu  
 65 70 75 80  
 Gly Thr Ala Val Ala Asn Gln Asn Ala

85

<210> 1917  
 <211> 159  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 1917  
 Leu Glu Ile Gly Arg Ala Gln Leu Asp Arg Ser Phe Lys Gln Leu Lys  
 1 5 10 15  
 Lys Thr Val Tyr His Ser Thr Ser Val Leu Ser Thr Leu Ser Ser Ser  
 20 25 30  
 Trp Ser Ser Lys Pro Pro Leu Ala Val Lys Tyr Gln Leu Asn Pro Gly  
 35 40 45  
 Ser Leu Thr Glu Ser Asp Asp Ser Lys Ser Leu Cys Ser Thr Leu Asp  
 50 55 60  
 Lys Leu Leu Ala Trp Glu Lys Lys Leu Tyr Glu Glu Val Lys Ala Arg  
 65 70 75 80  
 Glu Gly Glu Lys Ile Glu His Glu Lys Lys Leu Ser Val Leu Gln Ser  
 85 90 95  
 Gln Glu Gly Lys Gly Glu Asp Glu Thr Lys Val Asp Lys Thr Lys Ala  
 100 105 110  
 Ser Leu Asn Lys Leu Gln Ala Leu Ile Ala Val Thr Ser Glu Ala Val  
 115 120 125  
 Ser Thr Thr Ser Asn Ala Ile Ile Gly Leu Arg Asp Ser Arg Leu Val  
 130 135 140  
 Pro Gln Leu Val Glu Leu Cys His Gly Phe Met Tyr Met Trp Arg  
 145 150 155

<210> 1918  
 <211> 349  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 1918  
 Met Glu Trp Asn Ala Lys Pro Pro Leu Gln Trp Glu Trp Glu Asn Leu  
 1 5 10 15  
 Met Met Phe Gly Ser Lys Ala Thr Glu Thr Ser Lys Pro Leu Arg Ala  
 20 25 30  
 Thr Asp Trp Gly Ile Glu Ala Glu Glu Leu Ile Asp Pro Gly Ser Leu  
 35 40 45  
 Phe Leu Tyr Glu Asn Gly Gly Gly Ser Ser Ser Cys Thr Ser Ile Asp  
 50 55 60  
 Pro Gly Tyr Thr Ser Val Ser Lys Ser Ser Lys Ser Ala Ser Val Asn  
 65 70 75 80  
 Ser Ser Ser Thr Asp Glu Leu Lys Ile Ser Lys Phe Ser Val Glu Ala  
 85 90 95  
 His Glu Gly Phe Ser Leu Gln Ser Ser Lys Lys Glu Leu Ala Val Asn  
 100 105 110  
 Asp Phe Thr Gly Met Ser Pro Ala Leu Glu Pro Ser Val Cys Ser Gly  
 115 120 125  
 Glu Pro Leu Leu Ser Leu Lys Leu Gly Lys Arg Ile Tyr Phe Glu Asn  
 130 135 140  
 Thr Ile Asp Lys Asp His Val Lys Thr Gln Asp Leu Pro Ser Val Met  
 145 150 155 160  
 Lys Ser Pro Asp Thr Pro Ala Lys Arg Asn Lys Ser Asn Cys Gln Gly  
 165 170 175  
 Thr Ser Ala Pro Arg Cys Gln Val Glu Gly Cys Asn Leu Asp Leu Ser  
 180 185 190  
 Ser Ala Lys Asp Tyr His Arg Lys His Arg Val Cys Glu Ser His Ser  
 195 200 205

Lys Cys Pro Lys Val Ile Val Ser Gly Ile Glu Arg Arg Phe Cys Gln  
 210 215 220  
 Gln Cys Ser Arg Phe His Gly Leu Ser Glu Phe Asp Glu Lys Lys Arg  
 225 230 235 240  
 Ser Cys Arg Lys Arg Leu Ser Asp His Asn Ala Arg Arg Arg Lys Pro  
 245 250 255  
 Pro Pro Asp Val Thr Gln Leu Asn Pro Ala Arg Leu Ser Ala Leu Phe  
 260 265 270  
 Tyr Gly Gly Met Gln Gln Leu Asn Pro Val Leu Ser Arg Ala Pro Ala  
 275 280 285  
 Ile His Thr Arg Ser Thr Ala Ser Phe Lys Trp Ala Asp Thr Gln Asp  
 290 295 300  
 Thr Lys Leu Ile Glu Lys Gly Pro Lys Leu Pro Ile Gly Gly Gly Val  
 305 310 315 320  
 Gly Glu Cys Ile Thr Ile Pro Ser Asn Gly Ile Pro Asp Thr Leu Lys  
 325 330 335  
 Ser Thr Gly Leu Gly Lys Ser Tyr Asn Glu Leu Leu Ser  
 340 345

<210> 1919  
 <211> 122  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 1919  
 Lys Lys Tyr Ile Tyr Leu Gly Leu Phe Asp Ser Glu Val Glu Ala Ala  
 1 5 10 15  
 Arg Ala Tyr Asp Lys Ala Ala Ile Lys Cys Asn Gly Arg Glu Ala Val  
 20 25 30  
 Thr Asn Phe Glu Pro Ser Thr Tyr Asp Gly Glu Met Ile Ala Lys Ala  
 35 40 45  
 Ser Asn Glu Asn Ser Ile Tyr Gly Asp His Gly Leu Asp Leu Asn Leu  
 50 55 60  
 Gly Ile Ser Ala Ser Ser Arg Gly Met Val Glu Thr Leu Glu Pro Ser  
 65 70 75 80  
 Asp Asp Met Arg Gln Gly Ser Ser Leu Arg Val Gly Asn Ser Ala Ala  
 85 90 95  
 Ser Trp Gly Asp Pro Ser Val Glu Gly Leu Ser Met Thr Ser Gly Gln  
 100 105 110  
 Pro Leu Leu Asp Gly Cys Leu Ser Tyr Arg  
 115 120

<210> 1920  
 <211> 155  
 <212> PRT  
 <213> Pinus radiata

<400> 1920  
 Leu Ile His Gly Gly Gly Gly Asp Asp Tyr Val Gly Leu Cys Glu Gly  
 1 5 10 15  
 Gly Phe Asp Thr Ala His Ala Ala Ala Arg Ala Tyr Asp Arg Ala Ala  
 20 25 30  
 Ile Lys Phe Arg Gly Val Glu Ala Asp Ile Asn Phe Thr Leu Thr Asp  
 35 40 45  
 Tyr Gln Glu Asp Leu Asp Gln Thr Ser Lys Leu Ser Lys Glu Glu Phe  
 50 55 60  
 Val His Ile Leu Arg Arg Gln Ser Thr Gly Phe Ser Arg Gly Ser Ser  
 65 70 75 80  
 Lys Tyr Arg Gly Val Thr Leu His Lys Cys Gly Arg Trp Glu Ala Arg  
 85 90 95  
 Met Gly Gln Phe Leu Gly Lys Lys Tyr Ile Tyr Leu Gly Leu Phe Asp

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          100          105          110
Ser Glu Glu Glu Ala Ala Arg Ala Tyr Asp Lys Ala Ala Ile Arg Cys
          115          120          125
Asn Gly Lys Glu Ala Val Thr Asn Phe Asp Pro Ser Leu Tyr Glu Lys
          130          135          140
Glu Ile Leu Glu Glu Arg Arg Glu Ser Gln Thr
145          150          155

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<210> 1921  
 <211> 79  
 <212> PRT  
 <213> Pinus radiata

```

          <400> 1921
Leu Ile Gly Met Pro Asp Thr Asn Tyr Gly Ser Glu Gln Thr Asn Ala
  1          5          10          15
Cys Lys Lys Gln Lys Arg Ile Arg Ser Lys Asp Ser Gly Glu Asp Gly
          20          25          30
Glu Asp Arg Gln Arg Glu His Pro Phe Ile Val Thr Glu Pro Gly Glu
          35          40          45
Leu Ala Arg Gly Lys Lys Asn Gly Leu Asp Tyr Leu Phe Asp Leu Tyr
          50          55          60
Glu Gln Cys Gly Lys Phe Leu Leu Asp Val Gln His Ile Ala Lys
65          70          75

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<210> 1922  
 <211> 164  
 <212> PRT  
 <213> Pinus radiata

```

          <400> 1922
His Gly Asn Arg Phe Cys Arg Thr Gly Ile Ser Ser Cys Ala Gly Ser
  1          5          10          15
Gln Ile Pro His Cys Gln Ala Glu Gly Cys Lys Ala Asn Leu Ser Ser
          20          25          30
Ala Lys His Tyr His Arg Arg His Lys Val Cys Glu Leu His Ser Lys
          35          40          45
Ala Ser Thr Val Ile Val Gly Gly Phe Ile Gln Arg Phe Cys Gln Gln
          50          55          60
Cys Ser Arg Phe His Pro Arg Ser Glu Phe Asp Glu Gly Lys Arg Ser
65          70          75          80
Cys Arg Lys Arg Leu Ala Asp His Asn Arg Arg Arg Arg Lys Pro Gln
          85          90          95
Pro Ser Thr Cys Val Thr Ser Gln Ser Gln Ala Gly Thr Thr Gly Leu
          100          105          110
Glu Asn Asp Asn Gln Thr Thr Lys Gly Ser Ser Gly His Ile Thr Thr
          115          120          125
Ala Val Gln Asn Thr Pro Asn Ile Ser Arg Ser Thr Ser Ser Thr Ser
          130          135          140
Pro Ser Leu Ile Thr Ser Val Pro Met Met Met Phe Pro Asn Asn Tyr
145          150          155          160
Lys Gly His Ser

```

<210> 1923  
 <211> 125  
 <212> PRT  
 <213> Eucalyptus grandis

```

          <400> 1923
Asn Thr Thr Phe Ile Thr Pro Asn Ser Lys Arg Ile Ile Ser His Asn

```



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1           5           10           15
Pro Ser Ser Val Asp Arg Pro Ala Glu Ser Ala Ala Leu Ala Lys Arg
20           25           30
Met Arg Arg Ala His Ile Gln Asn Ile Ala Gly Asp Cys Asn Leu Lys
35           40           45
Asp Arg Leu His Ile Gln Ser Gly Ile Thr Tyr Ser Gln Gln Gln Arg
50           55           60
Ala Pro Phe Ser Thr Leu Ala Gln Asn Phe Arg Thr Ser Asn Ser Pro
65           70           75           80
Pro Gln Gln Ser Glu Ser Asn Gln Lys Glu Ala Thr Asp Asp Ala His
85           90           95
Gly Thr Asn Val Gln Gly Thr Phe Leu Lys Lys Asp Asp Pro Lys Val
100          105          110
Thr Ala Leu Ile Gln Gln Ala Glu Leu Leu Ser Ser Leu
115          120          125

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<210> 1924  
 <211> 50  
 <212> PRT  
 <213> Eucalyptus grandis

```

<400> 1924
Ala Ala His Gly Thr Asn Val Gln Gly Thr Phe Leu Lys Lys Asp Asp
1           5           10           15
Pro Lys Val Thr Ala Leu Ile Gln Gln Ala Glu Leu Leu Ser Ser Leu
20           25           30
Ala Val Lys Val Asn Ala Asp Asn Met Asp Gln Ser Leu Glu Asn Ala
35           40           45
Trp Lys
50

```

<210> 1925  
 <211> 257  
 <212> PRT  
 <213> Pinus radiata

```

<400> 1925
Ala Val Ser Tyr Leu Arg Ser Gly Ile Glu Glu Arg Glu Ser Glu Arg
1           5           10           15
Leu Thr Asn Lys Met Asn Met Lys Ile Arg Thr Ser Asp Thr Ser Thr
20           25           30
Pro Asp Asp Gln Gln Gln His Ser Gly Ala Val Lys Val Ala Ile Pro
35           40           45
Ala Val Ser Gly Asp Ser Gly Thr Ile Gly Leu Lys Leu Gly Lys Arg
50           55           60
Thr Tyr Phe Glu Ala Val Lys Ala Ile Pro Thr Ala Ile Pro Ser Pro
65           70           75           80
Ser Cys Val Pro Ala Ala Lys Lys Gln Gln Ser Ala Leu Gln Gly Thr
85           90           95
His Met Val Pro Arg Cys Gln Val Glu Gly Cys Glu Met Glu Leu Thr
100          105          110
Ala Ala Lys Asp Tyr His Arg Arg His Lys Val Cys Glu Leu His Ser
115          120          125
Lys Phe Pro Lys Val Ile Val Asn Gly Ile Glu Gln Arg Phe Cys Gln
130          135          140
Gln Cys Ser Arg Phe His Thr Leu Ser Glu Phe Asp Glu Gly Lys Arg
145          150          155          160
Ser Cys Arg Arg Arg Leu Ala Gly His Asn Gln Arg Arg Arg Lys Pro
165          170          175
Gln Leu Asn Ser Thr Ala Met Lys Ala Ala Arg Phe Ala Ser Thr Phe
180          185          190

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[illegible]

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<210> 1926
<211> 230
<212> PRT
<213> Eucalyptus grandis
```

[illegible]

```
<210> 1927
<211> 35
<212> PRT
<213> Eucalyptus grandis
```

[illegible]

<210> 1928  
 <211> 112  
 <212> PRT  
 <213> Pinus radiata

<400> 1928  
 Glu Glu Thr Cys His Gly Asn Thr Phe Cys Arg Thr Glu Ile Ser Ser  
 1 5 10 15  
 Phe Thr Gly Ser Gln Ile Pro Gln Cys Gln Ser Glu Gly Cys Lys Ala  
 20 25 30  
 Asn Leu Ser Ser Ala Lys His Tyr His Arg Arg His Lys Val Cys Glu  
 35 40 45  
 Phe His Ser Lys Ala Pro Thr Val Val Val Gly Gly Gln Ile Gln Arg  
 50 55 60  
 Phe Cys Gln Gln Cys Ser Arg Phe His Gln Thr Ser Glu Phe Asp Gly  
 65 70 75 80  
 Gly Lys Arg Ser Cys Arg Lys Arg Leu Ala Asp His Asn Arg Arg Arg  
 85 90 95  
 Arg Lys Pro Lys Pro Ser Gln Cys Thr Thr Ser Gln Cys Gln Ala Gly  
 100 105 110

<210> 1929  
 <211> 117  
 <212> PRT  
 <213> Pinus radiata

<400> 1929  
 Met Asp Glu Val Gln Val Lys Val Asp Ile Gln Ser Thr Asn Val Ser  
 1 5 10 15  
 Ala Asp Glu Pro Arg Pro Ala Lys Arg Gln Gly Phe Glu Leu Ala Lys  
 20 25 30  
 Ser Pro Glu Asn Val Ala Ser Lys Ser Thr Ala Leu Ser Ser Pro Lys  
 35 40 45  
 Lys Pro Lys Ala Ala Ser Ser Ser Ser Ser Ser Pro Arg Ala Gln  
 50 55 60  
 Pro Pro Ala Cys Gln Val Glu Lys Cys Ala Ala Asp Leu Ala Asp Ala  
 65 70 75 80  
 Lys Glu Tyr Tyr Arg Arg His Arg Val Cys Glu Gln His Ser Lys Ala  
 85 90 95  
 Arg Ile Val Leu Val Leu Gly Leu Gln Gln Arg Phe Cys Gln Gln Cys  
 100 105 110  
 Ser Arg Phe His Val  
 115

<210> 1930  
 <211> 143  
 <212> PRT  
 <213> Pinus radiata

<400> 1930  
 Met Ser Ser Thr Ser Ser Tyr Ser Ser Pro Ser Pro Asp Thr Pro Ser  
 1 5 10 15  
 Gln Ser Ala Ala Val Arg Pro Thr Ser Thr Arg Asp Asp Ser Ser Val  
 20 25 30  
 Met Glu Pro Pro Arg Lys Arg Ala Arg Ala Asp Leu Asn Ala Glu Gln  
 35 40 45  
 Arg Arg Glu Ala Arg Ala His Arg Asn Arg Ile Ala Ala Gln Asn Ser  
 50 55 60  
 Arg Asp Lys Arg Lys Ala Gln Phe Thr Tyr Met Glu Gln Arg Val Ala  
 65 70 75 80  
 Gln Leu Glu Glu Glu Asn Gln Arg Leu Arg Ala Gly Met Gly Leu Ser

				85						90					95				
Gln	Phe	Thr	Pro	Ala	Asp	Asn	Asp	Lys	Phe	Val	Ser	Leu	Glu	Arg	Glu				
			100					105					110						
Ser	Val	Gln	Ala	Arg	Glu	Asn	Arg	Glu	Leu	Lys	Glu	Arg	Ile	Lys	Ser				
		115					120					125							
Leu	Glu	Ser	Gly	Trp	Ser	Ala	Val	Ile	Lys	Ala	Leu	Gln	Ala	Ser					
	130						135					140							

<210> 1931  
 <211> 199  
 <212> DNA  
 <213> Pinus radiata

<400> 1931  
 aacaactgaa caataaaaaat cacaagcact gaatctaacc atctctccac aaagcagaat 60  
 catttttttag cagtgcagaa ttaaatcaaa acacaattgt tcggctgtaa agcaaagatg 120  
 aagcatcacg tagtgcacaa ttgctgtagc aagaaagctg taaagagagg cttctggtcg 180  
 cccgaggaag atttgaagc 199

<210> 1932  
 <211> 380  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1932  
 gggatctcta ggaacttcgt gaaaacgcgg acgccgacac aggtggcgag ccacgcccag 60  
 aagtacttcc tccggcggac caaccagaac cggcgacgcc ggcgggtccag cctcttcgac 120  
 ataaccaccg actcgtactt tggggtttca agctctacaa tggaggaggg tcatcatcaa 180  
 gcgcaccaag taccagctt cctctttcc ttgcctccgg cggtttcacc gggaaccggc 240  
 gagaaactgc tggaaagtct gcgactaaga aaagagggct gccagtcgaa acccaccctg 300  
 tcgaagccca tccgcccggt cccgatcctt cccatccctc cgtcctcgaa aatggcggct 360  
 ctgcacctca acaaggcgac 380

<210> 1933  
 <211> 630  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1933  
 ggaccggcga gtttctccgg ggaagaccgg cggagcggcg gcggcgggcg cggcgggcgg 60  
 gggaaaagct cccgcctttc gtcgtttcgc ggtccgtgga ataggcgaca agtcggattg 120  
 cggtgcgtgt cgcgcctcgc ttcgatatata agggcggctt gctgctgctg ctactgggtc 180  
 gaggagtcaa ccgagctcga gcgttacgcg cttcccgaag gttccgcggg ctagggtttt 240  
 tttatatttc cctctgtttt tctccgttc ggccacggtc gttgcttcgc tttaaaagga 300  
 ttggcgcat tgagctgggc ggagcttgag gggtcgggcg gtggcgggcg aagtggagtg 360  
 gagcgggggg tgggtggtgct cgacatggta atcgggttct gacgatgccg agctttgttc 420  
 cagcgacacc ggctccaat tccattggtt cggagggaaa cgttgtccag tctaatcaaa 480  
 atacagattt tgggtcggtt gagcattcac ttggattccg catagaggat gccatcaacc 540  
 ttagcagaac agatcctgtc tttaatcaga taaaaccaa cggtcgagct cttggaactg 600  
 acattcaagc tcgtgctttt aataagtctg 630

<210> 1934  
 <211> 524  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1934  
 ctttactatt ctaagtccct tactttctggt ttggaatcac taatttcttg gtctcacttt 60  
 cgcttgccct atcacccgag agttctctgc agaaattca cagccgtcct ctgctctttc 120  
 accaaccatt gtatgcctgg ttttactagg gctaggaaga tgagcatgtc cggagaagaa 180  
 gagggtgacc tgcaagggg gccatggact cgcgaggaag acaatttgct cattcactcg 240

atcacatgcc	acggcgaggg	acgctggaat	atgttggcga	agagcgaggg	attgaagaga	300
actggcaaaa	gctgcagatt	aaggtggctg	aattacctga	gacccgacat	caagcgcggg	360
aatctcacc	cgcaagaaca	gctcatgac	cttgaacttc	accacaaatg	gggcaacagg	420
tggtcgaaaa	tcgcgcagta	tctcccagga	aggacagata	acgagatcaa	gaactactgg	480
aggacgcggg	tgcagaagca	agcgcgccag	ctcaacatcg	aatc		524

&lt;210&gt; 1935

&lt;211&gt; 440

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1935

gtgctgtgac	aaggtgggat	tgaagaaagg	gccgtggaca	cctgaagaag	accagaagct	60
cctcgcttac	atcgaagaga	acggccatgg	aagctggcgt	gctttgcctt	ccaaagctgg	120
tcttcagaga	tgcgggaaaa	gctgtaggct	aagatggact	aattatctta	gacctgacat	180
caagagaggg	aagttcagct	tacaagagga	acagaccata	attcaactcc	atgcccttct	240
tggcaatagg	tggtcggcca	tagcaactca	tttaccgaag	cgaacagaca	acgagatcaa	300
gaactactgg	aatacgcac	tgaagaagag	attggcgaaa	atgggaattg	acccggtgac	360
ccataagcct	aaaaatgacg	ccctagtctc	tagtgacggt	caatccaaga	gcgcggctaa	420
gctcagtcac	ctggctcagt					440

&lt;210&gt; 1936

&lt;211&gt; 299

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1936

cggacccttc	cgaaaaatgc	agggctcagg	agatgcggaa	agagctgtcg	cctgcgggtgg	60
acgaactacc	tgcgggccga	tatcaagaga	gggaggttca	cgttcgagga	agaggagacc	120
atcatccagt	tgcatggtgt	tttggggaac	aagtggctcg	ctatcgcggc	tcaattgccc	180
gggaggaccg	acaacgagat	caagaactac	tggaaacccc	acatcaagaa	aaggctactt	240
aaaatgggga	tcgaccgggt	gacacactcc	ccacgcctcg	atcttctaga	tctgtcctc	299

&lt;210&gt; 1937

&lt;211&gt; 377

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1937

ggccctcttc	tctttctctc	tctctgtgtc	tgtctttctt	gtggatccac	caggctcgtc	60
tttaagaata	tacagcagcg	agcaggcaag	acaacgcccc	atctctcttc	tctctctctc	120
tctctctgtg	gctctgtctt	tcttttggtt	cttgccgttt	tggggtgtgt	gtgttggttt	180
gtgtgaattg	gagcgaggat	ggggaggggg	agactgcagc	tgaagaggat	agagaacaag	240
atcaaccggc	aagtcacctt	ctccaagagg	agggcggggtc	tgctcaagaa	ggccacgag	300
atctccgtac	tctgcgacgc	cgaggctcgc	ctcatcatct	tctccgcaa	gggcaagctc	360
ttcgagtact	ccaccga					377

&lt;210&gt; 1938

&lt;211&gt; 278

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1938

tgtagcaag	catgtatgta	ctaactagta	gtttttgtaa	agcatgatgt	cgaaaccttg	60
agtagcaagg	tgaagatggc	tgaagagacg	gttaaaagag	taaccggact	gaacccaatg	120
ctgcatgtga	tgtccgacat	gtcttctgtg	ggtgtgccac	catttgatgg	tagtccttct	180
gatacatcag	cggatgctgc	agttcctgtg	cgagatgacc	caaagcacca	attctatcaa	240
accaattcta	gtaacccgc	atcatctgct	gacgatat			278

&lt;210&gt; 1939

&lt;211&gt; 342

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1939

acaggttgct	caattaagag	ttgagaattc	tactttactg	aaacgtctct	cggacataag	60
ccagaagtac	aatgtagcag	ctggtgacaa	cagagttttg	gaagctgatg	tcgaaacctt	120
gagagcagag	gtgaagatgg	ctgaagagac	ggttaaaaga	gtaaccggac	tgaacccaat	180
gctgcatgtg	atgtccgaca	tgtcttctgt	gggtgtgcc	ccatttgatg	gtagtccttc	240
tgatacatca	gcggatgctg	cagttcctgt	gcgagatgac	ccaaagcacc	aattctatca	300
aaccaattct	atgtaacccc	gcatcatctg	ctgacgatat	ga		342

&lt;210&gt; 1940

&lt;211&gt; 376

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1940

gctgttttca	catctttttg	aacacgcccc	taaagatccg	ccctcagagc	cgcctctgtc	60
cggtggtctg	tgacattcca	cctagaaatt	cccgaccaag	ttcccccttt	ctaagccaga	120
ttgggaaagg	ttcatatttg	tccaacagta	gtagtggatt	taaatgggga	ggcactcttg	180
ctgctacaag	cagaagctga	ggaaaggcct	ctggtcacct	gaagaagacg	agaagctcct	240
caggtacatc	acgcagtatg	gccatggttg	ctggagctct	gttcctaagc	ttgcaggtct	300
gcagaggtgt	gggaagagct	gcagattgag	gtggattaac	tacctgaggc	ctgatttgaa	360
gaggggcaca	ttctct					376

&lt;210&gt; 1941

&lt;211&gt; 169

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1941

aggaattgca	gcacctggaa	cagcaattga	gtggggcctt	atcatctgtc	aaggagaaga	60
aggagcaatg	gcttctggag	cagctggagc	gttcaagatt	acaggagcag	agggctatgc	120
tggagaatga	aactctgcgc	agacaggtcg	acgagcttag	aggtttcct		169

&lt;210&gt; 1942

&lt;211&gt; 188

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1942

cgagatctcc	gtcctctgcg	acgccgacgt	cgccctcatc	gtcttctcca	ccaagggcaa	60
gctcttcgag	tacgccaccg	actgttgcat	ggagaggatc	ctcgagcgtt	atgagagata	120
ttcatatgca	gagagccagg	ttctcacaaa	caatgccgaa	accaatggga	actggacttt	180
ggaacatg						188

&lt;210&gt; 1943

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1943

ctctttcctc	ctcaatcgga	agggttcttc	aacccaatgg	acggcaacct	ctcattgcaa	60
atcggataca	atccgacatg	tctggacgag	atgaatgctt	cggtttcgag	ccaaaatggt	120
gctggattca	ttccgggatg	gatgctttga	acttactaca	tcgacttgga	gtgtgaatcg	180
agctggtgaa	atthgtgcgt	gtgtcccttg	taaaattgct	atccgcaaga	caataagtac	240
ataatatatt	ggagctgtga	tgacataaaa	agaggaaggc	caccctttcc	tctctcatga	300
tcagaacttt	tgataatgtc	t				321

&lt;210&gt; 1944

&lt;211&gt; 905

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1944

ctagtggatc	ccaagtctcc	atcatcatga	tctccagcac	cggcaagctc	cacgagtaca	60
tcagcccctc	cacctcaacg	aagaagatgt	acgatcagta	tcagcaggcg	ctcgagggtg	120
atctctggag	ctctcactat	gagaagatgc	aagagaacct	gaggaagctg	aaggagggtga	180
acaagaagct	tcagctggag	gtcaggagga	ggttcgggga	aggactgaat	ggtatgagct	240
tatcgggaatt	gtgcggtctt	gagcaagata	tggacaacgc	cgttagcctg	atccgtgaac	300
ggaagtacaa	gacgctcggc	aatcaaatcg	acaccgccag	gaagaagaaa	aagaatgctg	360
aggaaataaa	caaaagtctc	ctgcaagact	ggaccaatct	gatcaagcat	ctgagggagg	420
acgaccgcga	cttcggaatg	gtcgacaacg	gcagggatta	cgaggctgtg	atcggttata	480
cagacgccgc	cgccgccgct	cgcttgtaca	ccctgcgcct	gcaaccggac	cagcccaatc	540
ttactagcgg	aggaggatcg	gagatcacga	cctacccttt	gctcgagtga	gacgaaggcg	600
tcggaaaccc	ttccgacgtc	ctcatattgt	ctattcattc	tgtctaaggg	ccgattccat	660
ctggaatcct	gacttcattg	gtatgtcgaa	gtttaggact	ttgttatgtc	atcctattca	720
gcagctaagt	ttgttcttat	cagaagctgt	tcctattatg	gaccgagggc	gatttcctct	780
agggcatcat	gtgttttaag	acaagtctat	atataagact	actttaaaac	aatcgaatga	840
gttggtgcaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	aaaaaaaaact	900
tcaag						905

&lt;210&gt; 1945

&lt;211&gt; 337

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1945

gcggcaagga	gcaactaaat	gtaacactct	gattactagg	gacctctcat	tgtcttttga	60
tggcatthta	atcaccagga	ggaatcacgt	ggctgaaaca	tttacttgtg	aagaactttt	120
acttagggga	gcatctaaaa	tgccaggaatg	ggctcatcaa	gaaggcctac	gagctctccg	180
tcctctgcga	catcgacatc	gccctcatca	tggtctcccc	ctccgaccgc	gtgagccact	240
tttcgggaaa	aagaaggatc	gaggatgtct	tgacccggtt	cattaacctc	accgaccaag	300
aacggacact	cctagatgtc	caggatcggc	gcacacg			337

&lt;210&gt; 1946

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1946

caaaccttcc	cagggtttcc	atttccattt	ccttcataga	atgctccgtt	cctttcttat	60
cccttttttg	gtactctctg	ttctcatggt	cctttcataa	agttttctca	tctcttaacc	120
aagactggta	agagagagag	agatagagag	tttattagtg	ggtgagggtg	ttaaaaaatg	180
ggaagagggg	gggttcagct	gaagaggata	gagaacaaaa	ttaacaggca	agtgaccttt	240
tccaagagaa	ggaatgggct	cctcaagaag	gcttatgagc	tctcgctcct	ctgtgatgct	300
g						301

&lt;210&gt; 1947

&lt;211&gt; 354

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1947

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gcttgaatat	cccaagctcg	tggttaggat	cgaagtcttg	cagaggaaca	taagaaactt	300
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&lt;210&gt; 1948

<211> 456  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1948  
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 gagatcgccg atgggatttt atagcgaagg tatcagggtt gaagggtggcg ggagaaaata 180  
 ataggtatgt tcgtttttaa gcctgggggt tttttggaag gagctacttc taaccgcccc 240  
 gctttattcc aggattgaat agaacaggaa aaagctgcag actacgctgg gttaactacc 300  
 tgcattcctgg cctaaaacga gggaagatga cacctcaaga agagagactg gtgctcgaac 360  
 ttcattccaa atggggaaat agatgggtcaa gaattgctcg caagctacca gggcgaacgg 420  
 acaatgagat aaagaactat tggaggactc atatga 456

<210> 1949  
 <211> 382  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1949  
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 catcaatcaa gctcaagcac catcacctca agaagaaaga aggaaagaaa gagagaagga 180  
 ccgagagccc gacagagggt cgcgcgcgca cgagacatgg gacgatcccc ttgctgcgag 240  
 aaggcgacaca ccaacaaggg cgcggtggacc aaggaagagg accagcgctt catcgactac 300  
 atccgcctcc acggcgaagg ttgctggcgc tccctcccca aatctgccgg gcttctcagg 360  
 tgcggcaaga gctgcaggct ca 382

<210> 1950  
 <211> 371  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1950  
 gttgagcagg tacagtttct tgaaaagagt tttgaagtag agaacaagct cgagccagat 60  
 cgcaaaatcc agttggcaaa agacctcgga ttgcagccac gacaggtagc gatatggttt 120  
 cagaatcgtc gtgcacgggtg gaagacgaag cagctagaga aggattatga aactttgcaa 180  
 gcttctttta acaccctgaa gtcagactac gacactctca tcaaggagcg gaatgatctg 240  
 aaagccgagg ttcttaacct cacggacaag ctgcttcaca agggaaatga gaaggagagt 300  
 tccgagtcgt ccagcaaatt atctcaaggg ctattccaga accccattgc tgattctggt 360  
 tctgaggacg a 371

<210> 1951  
 <211> 356  
 <212> DNA  
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<400> 1951  
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 aaactgggtg cttatatcaa gagatatggc atttggaact ggactcacat ggccgaaccc 180  
 gccggtttag cgagaacagg aaagagttgc cggcttcgat ggatgaacta tctgaggccc 240  
 aacatcaagc atggaaacat caccgaagaa gaggaagaaa tcattattaa cttgcaccga 300  
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<210> 1952  
 <211> 475  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1952



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gacaaggaat	atggcgagag	agaagatcaa	gatcaagaag	atagacaatg	tgacggcgag	180
gcaggtgacg	ttttctaaga	ggagacgagg	gcttttcaag	aaagccggag	agctgtcggc	240
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gaatatggac	caaccttctc	tcgagctgca	gctggagcat	agcaataaca	tgaggttaag	420
caaggaagtg	gcagaaaaga	gccatcgact	caggcagttg	aggggtgagg	atctt	475

&lt;210&gt; 1953

&lt;211&gt; 541

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1953

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aggacttgca	caactttcat	gggggcagca	agtgccttgg	ggctcaagct	cttcgggtgtt	180
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aaaggagtgc	cgtggacgga	agaagagcat	cggacattct	taatggggct	agagaagatg	480
gggaaaggcg	attggagagg	catctccagg	aactatgtga	ccacgagaac	cccaacccaa	540
g						541

&lt;210&gt; 1954

&lt;211&gt; 437

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1954

cgcggttggc	gtcagataga	agagcatgta	ggaacaaaaa	ctgcagttca	gatacgaagt	60
catgccccaa	agttcttctc	taagggttgc	cgcggggtaa	gtggcagcag	cgagggtgtg	120
attaaaccaa	ttgaaatacc	tcctccacgg	ccaaagcgga	agccaatgca	tccatatcca	180
cgcaaatctg	tcgattcaaa	ggagggtgaaa	ctgtcctatc	aacaagagag	gtctccatct	240
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ggttcagaca	tgctgggatc	agcatctttg	catcaacaaa	acagatgctc	ttcaccgact	360
tcattgtacca	ctgatgtacc	ctctattggc	ctagctgtaa	ttgagaagca	acctgaaata	420
ttcaaagaag	aagataa					437

&lt;210&gt; 1955

&lt;211&gt; 470

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1955

attcggtcac	gagttcactt	cgctgcctgc	ctcgtcgtcc	tcctgtcctt	cctcgcgaat	60
ctccatcggc	gagaactctg	ataaagcatc	cctcggctat	ctgtcggatg	gcctgctggg	120
tagatcccaa	gagaagaaga	aaggagttcc	atggacagag	gaggaaacaca	gaaccttctt	180
ggtggggcct	gagaagcttg	ggaagggtga	ttggagaggg	atctctagga	gctatgtgac	240
cacaagaaca	ccggcccagg	ttgcaagtca	tgctcagaaa	tatttcctcc	ggcaagtggg	300
cttcaacaag	aaaaagcggc	gctcagacct	ctttgacatg	ggtgatgtca	aaaccgcggc	360
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&lt;210&gt; 1956

&lt;211&gt; 384

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1956

ctgaaatttc	gtcttcaagc	catggaacaa	caggcgcaac	tacgcgatgc	cctgaatgaa	60
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catecttcaa	agtgcattgt	ttcacagctt	cctgtgagct	cccaaattgt	ccagctccat	180
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acaaccacaa	agtcagagtc	gaatcaatag	gacgtgggtg	gtccaacaac	tccggcgctt	300
ggacaaacct	cacttgtctc	ggttcttcga	caccctgcag	tagttctcta	gtgcatccat	360
tcattcatta	gtttttgcat	atgc				384

&lt;210&gt; 1957

&lt;211&gt; 388

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1957

gtttcctctt	caggagaaaag	caaggagctg	tagaggaatt	gaaaatgggtg	caagaagtcc	60
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aaatggggaa	atagatgggtc	gagaattgct	cgcaagctac	cagggcggaac	ggacaatgag	360
ataaagaact	attggaggac	tcatatga				388

&lt;210&gt; 1958

&lt;211&gt; 455

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1958

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ggagggaaat	ggagacgatg	attatgatga	gtatttacac	caacctgaga	agaaaaggcg	120
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accagataaa	aaagtccagc	ttgccaaaga	actcgggttg	caacctcgtc	aagttgctat	240
ttggttccaa	aatcgaaggg	caagatggaa	aactaagcaa	atggagaagg	atttcgataa	300
attgcaagct	agttttaact	gtttgaagtc	tgattatgaa	agtcttctca	atgagaaggga	360
gaagctcaaa	gctgaggtta	ttcatttgac	acaccagcta	gagcaaagga	gcaacggaat	420
tctgaacat	tcgacatata	tgaacaattg	cacac			455

&lt;210&gt; 1959

&lt;211&gt; 965

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1959

aagagaaaag	atacaatccg	ccgtggacc	aagaaggtca	aagcccgtc	tctgcacgat	60
gatgggtagt	agtagtagta	ctacttatct	tccgtgaggt	ctctcgaatt	aggggtttct	120
tgattttcgc	caacccccca	atattttatct	tttctttctt	tccttttttt	cgcttctctc	180
gcagttcacc	tagaaaagct	acgagggtct	cgcaccagtt	ccgtacgggg	ctgcttcagt	240
gcgtagcgtg	tactatctcg	tctcaggtgg	tgtttcgctt	ttatggggat	gtccttcggc	300
gggggctgtt	cgaagattct	tgtagctccg	tagcttgctc	tgccggattt	ggttggggcg	360
atcgtcaggt	ttcttccagt	taaagtggcg	atttttaagg	ggagcgaggg	cgtttgagct	420
ggtaaagtcc	gaagcttttt	gagttcggcc	gccagggttg	tgctctagag	ataactggag	480
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tgatggcaga	gttgtgaacg	gcatgccgag	cttcgtccct	caattaccca	cttcgaattc	660
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gcagtctctt	ggataccgca	tagaagatgc	agttgacctc	agcagaaatc	ctgtcttcaa	780
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gtccctttca	tcctcagaca	gaaatctttc	tgtgaatatt	gtgggggtctc	agactctatc	900
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ggggg						965

<210> 1960  
 <211> 599  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1960  
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 cggtcctctcg ccgtcgccgg tgcgagagaa tgcctcccc acgcgcgcgc acccccgacg 180  
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 tgcgggtggt cgtggactcg atgaggaagt gcgtgagcct gaacaacctg tctcagtacc 300  
 agcaccgcga ggacgcgaat ccgcccacac ccagcggcgg gagcggcggc aacaaggaaag 360  
 aggcgcgcaa aggtctacga tcggccgacg acgccgcgca caaccccgcc ggtggccgcg 420  
 agcgcgaagag aggagttcct tggacagagg aggagcacag gctgttcttg ttgggattac 480  
 agaaggtggg gaaaggagat tggagagcga tatccaggaa ctttgtgaag acccgcacgc 540  
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<210> 1961  
 <211> 377  
 <212> DNA  
 <213> Eucalyptus grandis

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 gaagatgcga tacatagctg agctagaacg gaaagtacaa actttacaaa ctgaagcaac 300  
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 tagtgaattg aaactgc 377

<210> 1962  
 <211> 317  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1962  
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 cttcttctga tgacacttac gtggactcta gagaagagac aagtgaagaa tcaaagctag 180  
 atttctctga agatgaggag acgcttgtaa ttagaatgta caacctgggt ggagaaagg 240  
 ggtctcta at tgctggtaga atcccaggga ggacagctga agaaatcgag aagtactgga 300  
 attccagata ttcaaca 317

<210> 1963  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1963  
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 aagaaacgct gattccgagt tcttcgagg ctcttgagtc cgcttgggtt cctacttctt 180  
 cgaccgctca tcatggttca aaatcagtgg tcaattttga ggacgtttgt ggaggaggag 240  
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 aagaggacta cggcgacggg aactttcagc ctctgggtaa gaagcggcgg ctatcgcccg 360  
 accaaagcca tttctcagag aggcactttg aggtcgagaa caagctcgag cccgagagga 420  
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<210> 1964

<211> 372  
 <212> DNA  
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<400> 1964  
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 aaagttcaag gataaaacga cgagacaatg cagaaggaga tggtaacacat atttgaattc 180  
 tgacttcaag aaaggggggt ggtcaccgga ggaagatgtg cttttatgtg aggctcagaa 240  
 gattttcggc aacagatgga cagaaatagc aaaggtgggt tcaggcagga ctgacaatgc 300  
 cgtaaaaaat cggttcacia ctttgtgtaa gaaaagagca aggtacgaag ccttagcgaa 360  
 agagaataca ct 372

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 <211> 424  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1965  
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 gtcaacttca tactcaccca cggccaatgc tgctggcggg ccgtcccaa gctcgtctgg 180  
 ctccgcgcgt gtggcaagag ctgccgcctc cgctggacca actacctccg ccccgatctc 240  
 aagcgtggcc tcctcaatga agccgaggaa agcctgggta tcgatctcca tgccactctc 300  
 ggcaataggt ggtccaaaat agcagctaga ctaccggaa gaacggacaa cgagatcaaa 360  
 aaccactgga acacccatat caagaagaag ctcattagga tgggcattga tccagtcact 420  
 caca 424

<210> 1966  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1966  
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 atagctcgtg actttgtgac tacaaggact cctactcaag tggcaagcca tgcccagaag 180  
 tattatatcc ggcagagtaa tgctggccga agaaagaggc gctccagcct ttttgacatg 240  
 gctccagata tggtttgtct tctctatgat gttgcttctg cacattcatt gcactccgtt 300  
 caaatatccg gctcgtgcat gttttaagat gttttcttag ctcatgctga catatgcttt 360  
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 tcaaatg 427

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<400> 1967  
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 actacattcg caagcacggc gaaggatgtt ggcgaactct tcctaaggct gccggtctcc 180  
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 gagggcaact tgctgaggat gaagaggatc ttatcatcaa gcttcatgct ctcttaggca 300  
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<210> 1968  
 <211> 197  
 <212> DNA  
 <213> Eucalyptus grandis

&lt;400&gt; 1968

ggtcgcccga	ggaagacgag	aagctcttca	actacatcac	ccgattcggc	gtcggctgct	60
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ggataaacta	cctgaggcct	gacctcaaga	gggggatgtt	ctctcaagaa	gaggaggatc	180
tcattgtcag	tctccac					197

&lt;210&gt; 1969

&lt;211&gt; 365

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1969

gcaaaatctt	atttggttc	ccttacagaa	actatacagt	ccctgaatgc	tgagcttgaa	60
agaactagat	cggagttggt	tgaagcaaag	aagagagagg	aagagattat	ttcaaaagaa	120
gctgaaagag	tagagaagaa	taagagagaa	gtggaaaatc	tggaactcaa	tcttctgcaa	180
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agcgcaagac	ttgaaactgc	gcaattgagg	gctgctttgg	aagccacaga	gggaaaattt	300
gaagcaatgc	tgagtgcag	taggttggag	gcagagcatg	tcaaaggagc	tattgagaag	360
tataa						365

&lt;210&gt; 1970

&lt;211&gt; 260

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1970

gaaatattgg	tgactcaa	at	agagcaactt	caaagaaagg	aacggatgtt	tagcgaagag	60
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ggatctggaa	gcctccaaag		aagtgaagtc	gagactcaac	tggttatgag	accgcccagt	180
tcaaatgctg	attttctttt		taatagttct	cattgataat	cactgtattc	atatctttgt	240
tattaattta	ttatgaaatg						260

&lt;210&gt; 1971

&lt;211&gt; 332

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1971

tctctctggt	gtggggggca	ctcaaaatgg	ggaagacgaa	gatggagatt	aaacgcattc	60
aaaaccctag	ccgcgcgcag	gttactttct	cgaaacgcaa	gaacggattg	ctaaaaaagg	120
cattcgagct	ttctgttctc	tgcgatgctg	aagtcgccct	gatcattttc	tcggaaactg	180
gcaagatctg	cgagtttgca	agccacgacg	acatggcaac	aatactggaa	aaatatcgaa	240
tatacacgga	aacacatgga	aacatggagt	cctcgtcggt	ccaaagcgtg	aagattgggtg	300
aatcacaact	caaagcgttg	cgtgagaaga	tg			332

&lt;210&gt; 1972

&lt;211&gt; 413

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1972

cttcgaggtg	ctaattggctg	cacaatacct	tcaattggat	tgacaagcat	agaacgcgtg	60
gaagttcaga	ctcaactggt	catgagacct	ccacatgcc	cagagatgga	cgacaacttt	120
atggatgttg	acaacgtgcc	actatctgga	tgatgttttt	ctgtttctgt	tacataatat	180
ggccactgat	gacaccatac	tttatttttg	tatttgcttt	aaaaatgact	ctttctttca	240
ctgacttttg	atggactgta	tgatagttga	tttttggcc	tcatacttta	gcaaattggtt	300
atgggtacct	gttttggccc	gaggccttgg	aggatctact	ctctatatgt	tactgtttta	360
ctttttacat	ttgtgctcac	tgactcatat	gatggacttg	cccacatatg	atg	413

&lt;210&gt; 1973

<211> 521  
 <212> DNA  
 <213> Pinus radiata

<400> 1973

agaagatggg	agcttggtga	tctgtgaaag	atctctctct	gcggtcaag	gtatgcctat	60
ggtatcacag	tctcaaagct	ttgtgcatgg	tgaactctta	tctagtgggt	atttgatccg	120
accctgtgaa	ggcagaggag	cattagtcac	catggttgat	cacaggaact	tagaggcttc	180
aagtgtccct	gaagcacttc	gtcccttata	tgagtcacat	acattctttg	cacagaagat	240
gacagttgag	gcttcttata	atcttcaagg	taaagttcaa	ccggaaatga	tttccttata	300
aaaaaaaaactc	caacagccat	gtaatgtacg	gtcatacagt	caacggcttt	gcagaggctt	360
taatgaggca	gtcaacacat	tacctgatga	tggtgggatg	tcattgtcca	aagatgggct	420
gggggatgtc	actatttgtg	taaagtcttt	gtcaaattgc	cgaaaccaa	tgtcatcgct	480
aaatagccta	tgttcaacag	acatgggcat	cttgagtga	a		521

<210> 1974  
 <211> 461  
 <212> DNA  
 <213> Pinus radiata

<400> 1974

gaaaatgaaa	gccttcgagc	tcgtttaagg	catatgaatg	gcgatgacat	caattcggtt	60
aagcttcccg	aactcttcca	tctcgaacag	cagcttgaaa	cgcccgcaac	ccaagttcga	120
agaagaaagg	atcaagtttt	agacaacgaa	aaaatcaagc	gaaggaaaca	gatgcgccgt	180
aaggaagacg	agaacatcat	tcttcacgaa	atgcttgacc	agcaccatgg	acaaatggag	240
gaggataacg	ctcagattaa	tttcctatct	tgccaaccat	taaatagatc	ggatactact	300
ttccctgcat	cactactccg	cctgcaacca	aatcagccaa	atttgcagga	tattggatat	360
taattactga	acggaccatc	tgtgtgcatc	ataatgagaa	ggcatgggac	ttctcagtaa	420
cagtcaatta	tgaaaattcg	aagtttgtga	ggaaaaaaaa	a		461

<210> 1975  
 <211> 499  
 <212> DNA  
 <213> Pinus radiata

<400> 1975

tgagccccca	ggtgggacac	cgacctttca	gcccacatga	agacgccacc	atcatacaag	60
cccatgcgcg	gcatggcaac	aagtgggcta	cgattgcccg	cctcctaccc	gggcgccacc	120
acaacgctat	caagaaccac	tggaactcga	ctctgcgacg	tcgctatcat	ggcgagaaa	180
accagagcaa	cggtctagct	gtgaacttgg	agtcggcagc	tgaggacaaa	gaaacgatga	240
ctccgatgac	acctgtcaca	gccacggcaa	cggaacggc	aacggcaatg	ccagtggctt	300
tagtgttccc	aacggctgca	gacaacgtca	ggaagcggag	caacagtagc	tgcagcgcta	360
atgacaatcc	aggagatgcc	gaggtcgaat	cctgtaggct	taagaggctc	aatttttctg	420
aatccccatc	tagttctgaa	aatattaata	ataataacaa	taatgaagaa	gctgttagtg	480
gccattgcaa	ttcggccgc					499

<210> 1976  
 <211> 419  
 <212> DNA  
 <213> Pinus radiata

<400> 1976

ctcagagctc	gacaaaacct	acatacatc	gtctgtcatc	cctcccagaa	atacctagt	60
agggcgatcg	aggtcgaaag	gggcatttta	cgccattgaa	gcggtgtgca	tagggccaac	120
tctgagaact	gattgtgtct	tccttcggag	ggagaggggt	agcgagggtc	agaaagagag	180
agaaagagaa	agtagtccta	agggactgtt	taaaatgggg	cgagggtccag	tccagctgag	240
aaggatagaa	aacaaaataa	atcgtcaagt	aacgttttcg	aagagacgga	atgggctgat	300
aaagaaggcg	tcagagctgt	caatcctgtg	tgatgcggaa	gtggccttaa	ttgtcttctc	360
caacaaaggc	aaactctatg	agttctccag	ttccagtatg	accaagattt	tggaaagat	419

<210> 1977

&lt;211&gt; 459

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1977

gcaagctggc	ctccagcggt	gcggaagag	ttgcaggctt	cggtggatca	actacttgag	60
accagatctg	aagcgaaggca	cattctctcc	gcaggaagaa	aatctcattg	ttgaactgca	120
ttcagtcctc	gggaacaggt	ggtctcaaat	agcaacacac	ctgcccggaa	gaactgataa	180
cgagatcaag	aacctctgga	actcgtgcat	taaaaagaag	cttaggcaac	gaggcataga	240
tcctaacacg	cacaggcctc	tcagcgaggt	gaatgccgag	gcaggggatt	ctaagaacga	300
taacagcaat	aaagaagtcg	aaactcaggc	agccatggac	gaatctcatg	tttctgcagg	360
gaacgaattc	aagcatctga	atgcaattcc	tagggctgat	acggccaatc	ctaaattctt	420
tcattgtccc	gttgaggaca	acactttgat	tgctagcga			459

&lt;210&gt; 1978

&lt;211&gt; 331

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1978

ggagagtgca	ccaccgagat	ccacgcagtc	gaagagaaaag	agaaatctgc	aggaggagtt	60
gaaaatgagg	tgacacgat	ggcaaggtct	cccattttcc	tccaaaccaa	aagttaaaaa	120
gggtctctgg	tcgcctgagg	aagatgagaa	actcatcaat	tatatgatga	agaacggcct	180
tctcggctgc	tcctggagct	atgtggccaa	gcagattggg	ctgcagagat	gcggaaagag	240
ttgcagactg	agatggacta	actacttacg	tcctggcctt	aagcgggggtg	caatttcgcc	300
tgaggaggag	caattgatca	tacacttaca	g			331

&lt;210&gt; 1979

&lt;211&gt; 375

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1979

gttctatcaa	acttcttate	caccataccc	atttccatta	gacggctgaa	ttctcagatc	60
caatttggtc	cagccctcta	gcgacagaag	aagatgggaa	gagcaccctg	ttgtgacaag	120
gcaaatgtca	aaaaaggacc	ttggtcacca	gaagaagaca	caaaaactcaa	ggcgtttatt	180
gaacagcatg	gcactgggtg	caattggatt	gctcttccac	agaaagctgg	tctgaaaagg	240
tgtggaaaga	gctgcaggct	tagatgggtg	aactatattg	ggccagatat	aaggcatggg	300
ggtttctcag	aagatgaaga	taacatcatt	tgtagcctct	atgcaagcat	tgaagcatg	360
gtgtctataa	ttgca					375

&lt;210&gt; 1980

&lt;211&gt; 749

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1980

gagcttcatc	cgccattatt	gggtttcaat	tcgatcttga	tttgccagag	acgatgtgaa	60
ttaccattct	gtgggcaaaa	gcgagagagg	aggagaatgg	tgaggggaaa	gacccagatg	120
aaaaggatcg	agaacgacac	gagcaggcag	gttacgtttt	ctaagcgag	gaatgggtta	180
ctgaagaaa	cttatgagct	ctctgtgctc	tgcatgccc	aagtgggact	tataattttc	240
tcaccaagag	ggaaactata	tgaattcgcc	agtcccagca	tggaggagat	tttgaaaag	300
tataaaaaac	gttcgaagga	aaatggcatg	gctcagacaa	cgaaagagca	agatactcag	360
tattccaaac	attccaaaca	aaagctcgca	aatatggaag	aacagattag	gattcttgaa	420
tcaacccaaa	gaaagatgtt	gggggaaggg	ttggaatcgt	gttcaatggc	agaattaaat	480
aagttagaga	gccaaagctga	acgaggattg	agccatatac	gggctcgaaa	gacggaaata	540
ttggttgacc	aaatagaatg	tcttaaaaag	aaggaacgtc	tcttaagcga	ggagaacgcc	600
ttactcagta	gaaagtgggt	tgatcgtcaa	tccgtggacg	gttccgggtc	aacatcatct	660
tcaattggat	tgggaagcat	cgagcagatc	gaagttgaga	cacaactggg	tataagaccg	720
cctaatgcac	aggatcactg	ttctgtaaa				749

<210> 1981  
 <211> 339  
 <212> DNA  
 <213> Pinus radiata

<400> 1981  
 cttggctggg gaagacaacc cgctgcatta cggacattta gccagagatt gtgcaagggt 60  
 ttcaatgagg cagttaatgg cttcacagat gatggatggg ctttgatggg taacgacgga 120  
 atggaggatg taactattct cgtcaattca tctccaagca aactgttcgg tcaacagttt 180  
 gcttcttccg atgggcttcc tgctcttggt gggggcatcc tatgtgcca ggcttctatg 240  
 ctattacaga atgttctctcc agcattgctt gttcgtttct tgcgagaaca tcgatcagaa 300  
 tgggcagata gtaatattga tgcctattca gcagcctct 339

<210> 1982  
 <211> 373  
 <212> DNA  
 <213> Pinus radiata

<400> 1982  
 ggattccgac ctttccggct aaagctgctt catttctgtg tgtattgaag atggggagat 60  
 ctccctgctg tgaaaaagct catacaaaca aaggggctg gaccaaagaa gaggacgatc 120  
 gcctcatcgc ccacattcga actcacggcg aaggttgctg gcgctcgctt cccaaggccg 180  
 cagggctgat gcgctgcggg aagagctgca ggctccgatg gataaactac ctgcgtcctg 240  
 atctgaagcg tggaaaacttc tcagaagaag aagacgaact catcatcaaa ctccactccc 300  
 tactcgga caagtggctt cttattgcag gcagattgcc cgggcggacg gacaacgaga 360  
 taaagaacta ctg 373

<210> 1983  
 <211> 404  
 <212> DNA  
 <213> Pinus radiata

<400> 1983  
 aggcaataag tgttattatt gagaacttga ctgtggctga gatthttcagg gatggaccgt 60  
 tcaaactctg cgactggaga agaagatgta ctgtcaagat gcagggaag aaaacgtttc 120  
 atgaagctgg caattgagaa caggtataaa ctagcaacag ctcatgtggc ttacatggat 180  
 tctcttaggc gtatgggcac cggctcttcgg ctttttgctg aaggcgaaac gatgtcggag 240  
 tcttctatt ccacatcacc catagggact tctgaacttg ctgttgctt gcctgagaaa 300  
 tccgtatccc catctccatt tccatcctca tccccttcac tttctcaacc tcaaagtccc 360  
 cgttcagaga gacgagaatc tcgatctcca ctgcacagct tctc 404

<210> 1984  
 <211> 332  
 <212> DNA  
 <213> Pinus radiata

<400> 1984  
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 aacataaaat gtttttatta gggcttcaca aattgggaaa aggcgactgg agaggatatt 120  
 ccagaaactt tgtaacttcc agaactccta ctcaagttgc tagccacgca caaaaatatt 180  
 ttcttaggca gagtaatttg aacaaaagga aacgaaggtc gagcctgttc gatatatcca 240  
 ctgattcgtat ggaagattgc tatcaaggaa tcccggagct gtcaccgggt atgcacgac 300  
 tcagcctggg ccagaattca tctctgacct ct 332

<210> 1985  
 <211> 526  
 <212> DNA  
 <213> Pinus radiata

<400> 1985  
 ctctctccc gtctccaaac ccaagctaag gaaaggcctc tggtcgcctg aggaggatga 60



taaactcatc	aactacatga	tgaaaaacgg	ccaggggttc	tggagcgatg	tgcgcaagca	120
agctgggtctg	cagagatgcg	gaaaaagctg	taggctgagg	tggattaact	atttaaggcc	180
cgacctcaaa	cgcggtgcat	tttcacccca	ggaagaacaa	ttgatcatac	acttgcatc	240
cattctcggc	aacaggtggt	ctcagattgc	agcccgtttg	cccggacgta	cggacaacga	300
gatcaagaat	ttctggaact	cctgcataaa	gaagaagttg	aaacaccttt	cggcctccac	360
caacaacagt	aaatctatct	ctgcacctaa	tcgtaccagt	accatgaatt	catcgatcac	420
gccctttttct	gaatcgtctg	ccgagccatt	ggagggtcatg	gcaacaaggt	atcagccatc	480
gaatgctttt	aatcatgaag	tgcccactgc	agaaaaatcaa	gttttg		526

&lt;210&gt; 1986

&lt;211&gt; 366

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1986

atcagactca	catcaaacga	aactggagcc	gtgaaggggt	agttgcgggtg	ttaaattcta	60
ggacagcttt	ccgtattaga	aagaggcgcc	ctttacggga	gtcggcacca	aaccagagt	120
gagagaaata	atgggtagg	ctccctgctg	cgaaaagggt	gggtcaaga	agggccctg	180
gacgccggag	gaagatcaaa	agctcctcgc	ttacatacag	gagcacggcc	atggcagctg	240
gagggctctg	cctcagaaa	ctgggttgc	aagatgcggg	aaaagctgca	gattgcgttg	300
gactaactat	ctaagaccag	atatcaagcg	gggaaagtgc	aaccacacag	aagaacagac	360
aattat						366

&lt;210&gt; 1987

&lt;211&gt; 476

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1987

ccgaactccc	cgctgtgatc	aaatgggatt	aaaaaaggga	ccctggacac	ctgaagaaga	60
tcaaatactc	atctcctata	tcaacaagca	tggatcatga	aattggcgtg	cgctgcccac	120
gcaagcagga	cttatgcgat	gtggaaagag	ttgtcgcctg	cggtggacaa	actatctgag	180
acctgacata	aaacgtggga	acttcagtct	caaggaagag	cagactatta	ttcatctgca	240
tcaaatacct	gggaaccgat	ggtcagctat	tgcctcacac	ctccccggaa	gaacagataa	300
tgagataaaa	aatgtatgga	acactcattt	gaaaaaacgc	ctcctgcaaa	ttggggtaga	360
ccagtaacc	cacgcgccta	gaggatacaa	tgtatctaac	tgttacaccg	ctgtgaatat	420
ccgggacccat	catggcgagc	aggccgatca	tcagctccaa	agccatgtct	gcgtt	476

&lt;210&gt; 1988

&lt;211&gt; 151

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1988

ggacacctga	ggaagatcga	attcttatct	cctatataaa	aaggaatggc	catggaaagt	60
ggcttgcaact	gccgaaacaa	gcaggactta	gccgatgcgg	gaagagttgt	cgactgcggt	120
ggacaaacta	tctgagaccc	aacataaaac	g			151

&lt;210&gt; 1989

&lt;211&gt; 461

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1989

gtaaccatc	aggagtctc	ttctgtccaa	ccccctaac	tctccacttc	acagatctca	60
tgagacttaa	cctgttctaa	cgttgcagg	caataaccct	ctttgtctct	tggtctgtat	120
tttttgcttt	ttgaccacag	agcaggttca	acaagcttgt	acaaaggacg	cactgaaat	180
gaaggatttt	tactgcagct	tatgttaagg	tttattttat	ataaacgatg	ggaactgggg	240
aagaagcaac	gccaaactaag	cctgctgcc	aaccatcttc	ctcctccag	gagacaccga	300
caacacctgt	ttatccagat	tgggcagctg	ctttccaggc	atattatggt	ccaggtgcta	360
ccccacctcc	tcctgccttt	tttgcttcaa	cagtgggatc	tgcaccaact	ccacatccat	420

acatgtgggg tggacagccg ttgatgccac cttatgggac t

461

<210> 1990

<211> 418

<212> DNA

<213> Pinus radiata

<400> 1990

gtagattcct	tgtctatcaa	gaggggtgcac	aagggtttgtt	tttaagaaca	cagacaggca	60
gacagacaga	gacgtgatca	tggggcgagg	gaagattgaa	ataaagaaaa	tagatgatgt	120
aacgagcaga	caggtaaactt	tctcaaagcg	caagatgggg	atattcaaga	aagcccacga	180
gctgtctgtt	ttatgcgatg	cagaggtggc	tgttctcatc	ttttcaaaca	ccggaaggct	240
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caaagcaatt	aattgcccaa	catcagatcc	cattgtcgag	aataagagcc	caattcagga	360
aggcattgaa	atattgaggc	agaaacttcg	tgcattacaa	agattgcaaa	gaaatctg	418

<210> 1991

<211> 321

<212> DNA

<213> Pinus radiata

<400> 1991

actaaagcag	ctataaagag	actgcagtct	cagataatgg	ttgcattcca	ggcagttgat	60
acaacttctg	cagcaattct	gaaattgaga	gaagatgaac	tctatcctca	actcgtggag	120
ctatctaaag	ggctaatagca	gatgtggagg	gccatgtatg	aatgccacca	ggtccaaaat	180
catattgtcc	aacaggtgag	gcatttgggc	aatctggcaa	gcgcagaggc	cacaagtagt	240
taccatcagc	aggcaaccat	tcaattggaa	gctcagggtga	ctgcttggtg	tgacagtttt	300
tgtagaatga	taacgagcca	g				321

<210> 1992

<211> 390

<212> DNA

<213> Pinus radiata

<400> 1992

gagaaaacct	aagtctctctc	gcagcaagca	agccacgcat	tccctctctc	cgactcgggt	60
ttgggtgtaga	aggcagagat	ttactttgtt	tctgcttgtt	tgtcgggtctt	caccttcacc	120
ttcagacaac	atttgtctga	accgcggaac	tagctcttga	aatattgaaa	cccacctaaa	180
tcgcagggga	ttgggtggatg	ttagcagtgg	tcacagagcg	gtagagctag	ggaaaatcca	240
tatacaacta	catacacaga	taccattat	cagccatggg	cgctccgaag	caaaaatgga	300
catcagaaga	agaagggtgct	ctgcgagcgg	gcgtggagaa	gtatggcgcc	ggcaagtggc	360
agaccattct	caaggaccca	gagttcgctt				390

<210> 1993

<211> 476

<212> DNA

<213> Pinus radiata

<400> 1993

gcagtgggtca	tatggatggg	ggatccggag	aggaccaaga	tgccgccgat	caagatcacg	60
atcacgatca	cgatcatgat	cacgagcagc	agcagacgcg	gaggaaacgt	taccacagac	120
acactgctcg	tcaaattcag	gagatggaag	cgttggttaa	ggagtgtcca	catcctgatg	180
acaaacaaaag	gcagcggctc	agcattgaat	tgggccttaa	gccgcggcag	gtgaaattct	240
ggtttcaaaa	tcggcgtaact	cagatgaagg	ctcaacagga	tcgctcagac	aacgccattc	300
tccgtgcaga	gaatgaaaat	ctgcggaacg	agaacgtagc	actccgagaa	gcaattaaaa	360
atggtgcttg	tccaaactgc	ggaggggtcta	catcgctggg	agagatgcct	ggattcgacg	420
aacaccattt	ccgtatagag	aatacgcgct	taaaggagga	gcttgatcga	gtgtct	476

<210> 1994

<211> 429

<212> DNA

## &lt;213&gt; Pinus radiata

## &lt;400&gt; 1994

gataaaactga	gtgagcaaaa	ttactcagaa	agaaggaaga	gcagaacaat	tcgccccggag	60
gaatgggttg	cacacaaggg	caacgacaag	gggaatggga	agggaaaggc	gtccccctcga	120
attcctcaag	gcgaagtcta	agaaaaggctc	tctggtcacc	ggatgaagat	atagaactta	180
ccacctatat	catgagaaa	ggcctcatgg	gctgctggaa	ctatatcgcc	aagcaggctg	240
gtctgcagag	atgtggaaag	agttgcaggc	tgagatggat	taactacttg	cgacctgggc	300
ttaaactgtg	tgcaatttca	ccccagaag	agcgactgat	aatacagtta	caatccagtc	360
tcggtaacag	gtgggtctcaa	atcgcgccac	atttaccggg	acgcacagac	aatgagggtca	420
agaattact						429

## &lt;210&gt; 1995

## &lt;211&gt; 321

## &lt;212&gt; DNA

## &lt;213&gt; Pinus radiata

## &lt;400&gt; 1995

agcgcgtctc	tgtgaaaatg	gggagatctc	cgtgctgtga	gaaggctcac	accaacaaaag	60
gtgcctggac	ccaacaagaa	gatacccgcc	ttgtcgccca	cattcgagcc	catgggcaag	120
gcggtggag	ctcgcttccc	aaggcagcag	gactgctgcg	ctgtgggaag	agttgcaggc	180
agcgatggat	aaactacctg	catccagatc	tgaagcggag	taacttttca	gaggaagaag	240
atgaactcat	cgtcagactc	cattcgctcc	tgggaaacaa	gtgggtctctt	attgcgggga	300
gattgccggg	gaggacagac	a				321

## &lt;210&gt; 1996

## &lt;211&gt; 402

## &lt;212&gt; DNA

## &lt;213&gt; Pinus radiata

## &lt;400&gt; 1996

ccgcctccta	ccggggcgca	ccgacaacgc	tatcaagaac	cactggaact	cgactctgcg	60
acgtcgctat	catggcgaga	aagaccagag	caacgggcta	gctgtgaact	tggagtcggc	120
agctgaggac	aaagaaacga	tgactccgat	gacacctgtc	acagccacgg	caacggcaac	180
ggcaacggca	atgccagtgg	ctttagtgtt	cccaacggct	gcagacaacg	tcaggaagcg	240
gagcaacagt	agctgcagcg	ctaatagaaa	tccaggagat	gccgaggtcg	aatcctgtag	300
gcttaagagg	ctcaattttt	ctgaatcccc	atctagtgtt	gaaaatatta	ataataataa	360
caataatgaa	gaagctgtta	gtggccattg	caattcggcc	gc		402

## &lt;210&gt; 1997

## &lt;211&gt; 375

## &lt;212&gt; DNA

## &lt;213&gt; Pinus radiata

## &lt;400&gt; 1997

ttagcttgca	gaaaatgagg	tgcaaaacag	ggcaggcaca	aggcgtattg	gaagttgaag	60
gcactcaccc	tgctccttcc	aaaccaaagt	taagaaaagg	tctctggtca	cctgttgaag	120
ataaccagct	caccaactat	atcctgagaa	gaggcctcgt	cggctgctgg	aactatgtgg	180
ccaagcaggc	tggtctgcaa	agaaccggaa	aaagttgtag	gctgagatgg	attaactact	240
tacgccctgg	ccttaaactg	catccaattt	cacgccaaga	agagcagctc	atcatagaat	300
tacaatccat	tctcggtaac	aggtggtctc	aaattgcgcc	acagttgccg	ggacgcacgg	360
acattgagat	caaga					375

## &lt;210&gt; 1998

## &lt;211&gt; 466

## &lt;212&gt; DNA

## &lt;213&gt; Pinus radiata

## &lt;400&gt; 1998

acaacagctt	gaatctagtc	gaataaagct	gaaacaaatt	gaacaagagc	ttgagcgagt	60
gaagcaacag	ggaatttcca	tcaatggaca	tttgggcgat	cataatggat	caggggctgc	120

tgcatttgat	atggaatatg	gccgttgggt	tgaagaacaa	aacagacaag	cccgtagagct	180
cagggcttct	ttacaagcac	acctgacaga	tagcgaactt	tgtgttctgg	tggataatgc	240
tatagctcat	tatgatgaac	tctttcgtat	gaagggtgct	gcttccaagt	tggatgtttt	300
ccatcttatg	tcaggcatgt	ggaaaactcc	tactgagcgt	tgttttatgt	ggatgggagg	360
ttttcggcca	tcagagcttc	tgaagattct	tactccacaa	attgagcctt	taacagaaca	420
gcaatcattc	gcagtatcta	gcttgaaact	gtcatcacag	caggca		466

&lt;210&gt; 1999

&lt;211&gt; 243

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1999

ctgagagtta	agtgattggt	gggagggaaa	agagaaaaaa	gaggagatca	agaatgggtga	60
ggggaaaaat	ccagatgaag	aggattgaga	atacgccag	caggcaggtt	acattttcca	120
agcgtagaaa	tggattgctg	aagaaagctt	acgagctctc	ggttctctgc	gatgcagaag	180
ttggacttat	gattttctcg	ccaggaggaa	agctctatga	attcgccaat	accagcatgg	240
aga						243

&lt;210&gt; 2000

&lt;211&gt; 642

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2000

cgagcgcgaa	agactgaaat	attggtgact	gaaatagagc	aacttcaaag	aaaggaatgg	60
atattaagcg	aggagaatgc	tttcctcggc	aaaaagttcg	tgcattcctca	ttcgttttcg	120
aaaactcctg	gaagtgaatc	gggaagcatc	caaaacagtg	aagtcgagac	gcaactgggt	180
atgagaccgc	catgtacaaa	tgtcattttt	cttattaata	gttctcattg	ataatcaatg	240
tattcgtaac	tgtgttatca	atttattatg	aaaattttat	attaataaaa	ggtaaagctg	300
cttctcatat	cgcacctaata	tgttcaccac	gtccaaaaaa	aggctcttgc	caagtgaact	360
aaatgttttt	tgaaccgaag	tctgtcttcc	aaactcagta	tgtaaagctt	ctatgaatac	420
atactttaaa	ggttttgtat	tagcattacg	agcggagttt	tcctcattca	tccgatgagc	480
atgaagagtg	aggagtataa	tattgacgca	tgtggagaat	ttaatgttgc	atatactcct	540
acgtgtatat	atgtgatgtt	ttatatatat	atatatatat	atataatata	gatttgaatc	600
tataaaaattt	taaattatat	atttagttta	aaaaaaaaaa	aa		642

&lt;210&gt; 2001

&lt;211&gt; 485

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2001

gagagagctc	gcaaactgcg	cgccccgcgt	cgccgatcgc	cgggagaatc	gccgccggcg	60
agatatgggg	aaccagaagc	tgaagtggac	gaaggaggag	gaggaggcgc	tcctcgccgg	120
aatcgccaag	cacggcgccg	gcaagtggaa	gaacatcctc	aaggaccccg	aattcgcccc	180
cgccctcgtc	aatcgctcca	acatcgacct	caaggacaag	tggcgtaact	tgagcgtcgg	240
tacttctgga	caaggttcta	gagataaaca	aaggctgtca	aaagtgaana	gtctgatggc	300
cgctcctcag	tccagtaccg	tgcctctaaa	tccacaagct	catgctgcat	ctactgatgt	360
tgcattggtc	aattcttcaa	atagctttca	agatggcaaa	aattattcac	tgtgggtatc	420
tgtgctcctt	ttccttttca	gtaacggcaa	tcttttttac	ttctatcctt	tgttatcctt	480
tctgt						485

&lt;210&gt; 2002

&lt;211&gt; 356

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2002

cgactcgtca	gtcagctcgt	gcactccttg	caattcatga	ttattttctcc	cgacttcggg	60
cccttagttc	cctctggcct	gcccgtccaa	gagaatgaag	aggtcatggg	ctatgcaggc	120

tgcacatgtac	attggtgatc	tttaggaagc	tatcagtttt	gaagtagttt	cggacctaga	180
actgggtttat	ttctagtttt	cttcattttt	tttttctttg	gctataatta	ttttttcttt	240
cttagacacg	aagtcacaga	gaattgattg	atggtatgct	aagctatcat	aggttgggat	300
tgcatgtgtc	tcattgaaga	tactgcta	tgtgtaggca	ctcctgttca	ttagtc	356

&lt;210&gt; 2003

&lt;211&gt; 713

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 2003

tctccatcca	aattcccacc	ttctctcctt	cctccctttc	cccctttcct	tcctttctgca	60
ccgaagggaag	cccccgcttc	gcaagccacc	tctcggtaaa	gttcgctcct	ttttgggtcg	120
gcgaatcttg	ggctcgatcg	tggcttcgag	gaaggagggtg	gacgagatca	agggaccgtg	180
gagccccgag	gaggacgagg	ccctccgcct	cctggtgacg	aagcacggcc	cccggaaactg	240
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caaccagctc	tccccgcagg	tggagcaccg	ggccttcacc	ccggaggagg	acgacatcat	360
cgtccgcgac	cacgcccggg	tcggcaacaa	gtgggccacc	atcgcccgcc	tcctctccgg	420
gcgcaccgac	aatgccatca	agaaccactg	gaactccacc	ctcaagcgca	agtgtctccc	480
cccgtctctc	ccgtctgcgg	aggaagggaa	caacaggggcg	ttcgacgctg	ccgcggggta	540
cgacggggac	ttgagcccg	gggagcggcc	ggcgaagcgg	tcggcctccg	ccgggccttg	600
cctgagcccc	ggcagcccg	ccggatccgg	catgagcgac	tccagcgtgc	acttcgtgta	660
ccggcccgctc	gcgaagaccg	gccccgtggt	gcccccgacg	gtcgaggcga	cgg	713

&lt;210&gt; 2004

&lt;211&gt; 341

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 2004

acaggttgct	caattaagag	ttgagaattc	tactttactg	aaacgtctct	cggacataag	60
ccagaagtac	aatgtagcag	ctgttgacaa	cagagttttg	aaagctgatg	tcgaaacctt	120
gagagcaaag	gtgaagatgg	ctgaagagac	ggttaaaaga	gtaaccggac	tgaacccaat	180
gctgcatgtg	atgtccgaca	tgtcttctgt	gggtgtgcca	ccatttgatg	gtagtcttct	240
tgatacatca	gcggatgctg	cagttcctgt	gcgagatgac	ccaaagcacc	aattctatca	300
aaccaattct	agtaaccccg	catcatctgc	tgacgatatg	a		341

&lt;210&gt; 2005

&lt;211&gt; 1403

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 2005

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ttctttcttc	accatcgctc	tcgtctctga	ctttgatggg	ttggcgaggg	ggggagctga	120
gggagaggga	gaggagagga	gagaggagcg	gctgtgcgtt	cgcgtgcagg	gctgcacgag	180
gtgttctcgt	ttcgggcgag	ggcgctctgc	ttccatggct	gcttttaagt	aagacgcca	240
aagaaaacct	ttttgctctc	tcgagtgtca	tgaactcgca	ctgaaagtgc	gcgccgaacc	300
gagaagaaga	agaagaagaa	gaagaagaag	aaagagaaac	catcccttta	gaaaacgcga	360
aaaagagtaa	atagtaaaaa	gagcaagctt	gatcttactt	gatctaaaa	attaagatcc	420
ttctctgttc	gagagaagtc	acagtcctcg	tttttccaga	catgaagaga	cttggcagct	480
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cgagaaacgg	caaccccatc	taccacagca	gggacctgca	gtccatgctg	gagctgggac	600
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agaagaagcg	gcggctgagc	atcgaccagg	tcaaggccct	ggagaagaac	ttcgaggtgg	720
agaacaagct	cgagccggag	cggaaggtga	agctggccca	ggagctgggg	ctgcagccgc	780
gccaggtggc	cgtgtggttc	cagaaccgcc	gcgcgcgggtg	gaagacgaag	cagctggagc	840
gggactacgg	cgtgctcaag	tccagctacg	aggcgctcaa	gctcagctac	gacgccctca	900
agcacgacaa	cgaggccctt	cacaaggaga	taaaagagct	gaaatcgaaa	ctccgggaag	960
aagacgacaa	ccccgagagc	aatctctccg	tcaaagaaga	ggtcatcatc	cccggccacg	1020
acgtgtcggg	caagatccgg	gcgcgacagc	acggtgacga	cgacacccaa	cgtctccttc	1080

ccctccgat	caccgccccg	cctcgcgagc	tgagcttcaa	caatgggtggg	ctgaaggacg	1140
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gcagcccgaa	ccccgccg	cagagccacg	gcggcttctt	gaaattcatg	gggtcatcgt	1260
cctcttcggc	ctccccaccg	cgcgcgccac	cggcttctt	cggcggtgc	ttcagcttcc	1320
agttccagcg	agcgtaccag	cctcagcctc	agcctcctca	tcaccaccac	caccacagtc	1380
cgtacgtgaa	gatggaggag	cac				1403

&lt;210&gt; 2006

&lt;211&gt; 283

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2006

gagaggtaca	agagtgcacg	cagtgcattcc	tcacatccac	agtcggtttc	tgacgtgaac	60
actcagtttt	atcagcaaga	agcatccaag	cttcggagac	agataagaga	aatccaggtc	120
tcagataggc	atcttctagg	tgaggggtata	agtgcattga	gcttcaagga	tctcaagaat	180
ctcgagagca	aattagagaa	atcgatcagc	cgtgttagat	caaagaagaa	tgagatgctt	240
tttgccgaga	ttgagtacat	gcagaagagg	ggccttgtgc	agg		283

&lt;210&gt; 2007

&lt;211&gt; 252

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2007

agagaacaag	ataaacaggc	aggtgacctt	cgtaagagg	aggaatgggc	tgctcaagaa	60
ggcctatgag	ctctctgtcc	tctgcgatgc	tgaggtcgcc	ctcattatct	tctccaccgc	120
cggcaagctc	tatgagttct	gcagcagccc	tagcatgctc	aaaacgctcg	accgttacca	180
aaagtgcagc	tatggatccg	ttgaagttaa	caaaccctcc	aaagaactag	agaatgccta	240
ccgggagtag	tt					252

&lt;210&gt; 2008

&lt;211&gt; 386

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2008

tctagatcca	ccaccagcag	aaggaggtag	aagggggaga	aggaggagaa	ggaggaggag	60
atgggtagag	ggaagataga	gatacagaag	atagagaacg	acacgaacag	gcaagtgacc	120
tactcgaagc	ggaggaatgg	catcttcaag	aaagcccacg	agctcaccgt	cctctgcgac	180
gctagggttt	ccatcctcat	gctctccggc	aacaagaagc	tccacgagta	catcagcccc	240
accaccacga	caaaaaggat	gattgatgat	taccagaagg	ctcttgggat	cgatctgtgg	300
actacacact	acgatagaat	gcaagaggag	ttgaggaaac	tgaaggaggt	taataacaat	360
tttcggaagg	aaataaggca	gatatt				386

&lt;210&gt; 2009

&lt;211&gt; 123

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2009

gagaaacctt	atgggggaag	atttggggac	cttgaactcg	aaggagctcg	agcagctcga	60
acgtcaactt	gaggcatcat	tgaagcatat	taggtcaact	aagactcagt	gcagtctcga	120
tca						123

&lt;210&gt; 2010

&lt;211&gt; 581

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2010

cttagggcta	gcttgcttac	atcttcacca	tcttctgcgt	agtttcaaca	tttttagagtt	60
gaagaaaaagg	agaaaaaact	aggcaaaactt	gcgaccatgg	tttttccaac	ccaagccacg	120
cccaggaggt	ccccgcagag	gaaaaatgggg	aggggaaaga	tcgagatcaa	gcggtatcgag	180
aacacgacga	atcggcaagt	gactttctgc	aagcggcgga	atggcctcct	caagaaggca	240
tatgaactct	ccgttctttg	cgaagccgag	gtcgcctca	tctgtctctc	cagccgcggc	300
cgcctctatg	agtatgccaa	cgatagtgtc	aaagcaacca	tcgagaggta	caagaaggct	360
tgctcagatt	cctccagtag	cggatccggt	tctgaagcta	atgttcagtt	ttatcagcaa	420
gaatccgcca	agttgcaaca	acagattaat	aacatgcaga	acaataacag	gcaactgggtg	480
ggtgactcaa	ttgctgggat	gaatatgaag	gatatgaaga	ctacggagca	aaaactagaa	540
aaagcaatcg	ctaaaattcg	cgccaaaaag	aatgcgattt	t		581

&lt;210&gt; 2011

&lt;211&gt; 538

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2011

tcagcacaag	gaacaaatgc	tggttgaagc	taacagagaa	ttaaggaaga	agctggaaga	60
gagcaatata	agaatccctc	tccgccttgg	atgggaagct	gaggatcaca	ataacatttc	120
atacagccgc	cttcccatgc	agtcgcaagg	attgatcttc	cagcccttag	gcggaacccc	180
gacattgcag	atcgggtaca	atcctgcagg	ctcgaatgaa	ttgaatgttt	cggctgccga	240
ccaacatccc	aacggattca	ttcccggatg	gatgctctga	atcgttccgc	aagtgaactg	300
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ttcttctgga	tgacctatac	gaagatccat	cattcgtgga	tattgtccat	ggacgtaccc	420
taaaaggaag	gacagtatga	atccaatcta	gcttactatt	ttgtataaga	ataaacatct	480
gtgctgctga	tatttggaaat	tcatctatgt	tatttaatga	aaaaaaaaaa	aaaaaaaaaa	538

&lt;210&gt; 2012

&lt;211&gt; 341

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2012

aggcagcaaa	gagctcgagt	ccttggaagg	acagctagat	gggtcattga	agcagatcag	60
atcacgaaga	actcagtaca	tgtagataaa	gctgactgat	cttcaacatc	gggaacagtt	120
gctccacgaa	gcaaacagga	ccttgaatca	acggttgatg	gaaggatacc	aagtgaatgc	180
gctccagtta	aatcaacatg	ccgaggaagt	cggaggatac	ggatcatccac	cgcgcgcgcc	240
actgccgcca	cagccacttg	ctcagcctca	cagcgaagct	tttttcaatc	ccttggaatg	300
tgaaccact	ttgcaaatgg	gataccagcc	cgatccagtg	t		341

&lt;210&gt; 2013

&lt;211&gt; 934

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2013

gcgccatgac	gcggcgatgc	tcccaactgct	gcaacaaggg	ccacaactcc	aggacctgcc	60
ccgtccgcgg	cgccggcggg	gacggcgggg	gcgcggcggc	cgccccctcc	tcctcctccc	120
cctccacctc	ctcctctggc	gccgcggcgg	cggcggcggc	ctcggcctcc	ggcggcgggg	180
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gctcgtccaa	tcggcgcgctc	gagaggaaga	aaggtaacct	atggacggag	gaagagcatc	420
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tggtactgac	tgaccaaccc	tcacatccag	aagaaacatt	tctgcctcct	ttggtcagac	660
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ctatggagac	ctcgcaccca	gaaacatctg	aagggggcgg	tgatgttgcg	atggaatcaa	780
ttgatcaagt	acctcttgta	ccctgttact	tcccatacta	tttaccacta	ccctttccca	840
tgtggccgcc	caacatggcg	cctcctgaag	atggaagggt	ggtggagaca	tctcatcacc	900

gtgtgctaaa gccaatccca gtaattccaa aaga

934

<210> 2014  
 <211> 372  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 2014  
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 ggatgcttta gttcacgagt cgaagactat gagcagtgcc aaaaataatt cacctgaaaa 180  
 aagtacaaat tcatctgctc tgacacctgg tgatataagc agttccactt tggatatttg 240  
 caagtctgaa tgggaagagt atgggtgacc catttctcca ccgggccatt ctgcaacttc 300  
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 tcccgatacc tt 372

<210> 2015  
 <211> 411  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 2015  
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 tgagcccgcc caagacgcaa ccactatttc gttcgcagcg gctccgtcaa aacaagaacc 120  
 gcgagacgac gccatcgccg ccgcgctcgg ctacaagaac gagaacaacc cgacaacaac 180  
 ggcagcaacg gttcaagaaa agtgtcccga cttaaattct gagctcagaa taagccctcc 240  
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 tgccctgcagc ctggggttgc agaacagcaa ggagtgcagt tgcaggagag gagcgagcgg 360  
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<210> 2016  
 <211> 356  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 2016  
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 gaaccggcag gtcacctttt gtaaacgccg gaacgggttg ttgaagaagg cttatgagct 180  
 atcgggtgtt tgcatgctg aagtggcgct tattgtcttc tcgagccgtg gcaggctcta 240  
 tgaatatgct aacaacagtg tcagaggaac aattgagagg tacaagaaag caagcagtga 300  
 ttctccaca tcccacagtc cgtttcctga agtggaacac tccagtttta tccagc 356

<210> 2017  
 <211> 356  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 2017  
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 tgtgtgatgt tgaggtcgcg ctctcatct tctccagccg tggcaagctc tatgagtttg 180  
 gcagcgctgg cccttctggc ataaataaga cgcttgaaac ataccaacgt gacaacttca 240  
 ctctcaaga caacgttgct gaacatgaga cacaacagaa ctggtttcaa gagatatcaa 300  
 aattgaaggc aaaatatgaa ctcttcaaca aactccagaa gcatttgctt ggaaaa 356

<210> 2018  
 <211> 495  
 <212> DNA  
 <213> Eucalyptus grandis



## &lt;400&gt; 2018

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gagctctccg	ttctctgtga	cgctgacatc	ggcctcttca	ttttctcccc	ccacggcaag	360
ctctatgagc	tggccaccaa	aggaaccatg	aaggggctga	tcgagaggta	catgaagacc	420
acccaaagcc	aagctgctct	gaccgaggaa	gccacaccga	gccaaccact	ggatgccaaa	480
gaagagatta	acata					495

## &lt;210&gt; 2019

## &lt;211&gt; 613

## &lt;212&gt; DNA

## &lt;213&gt; Eucalyptus grandis

## &lt;400&gt; 2019

agaaagagag	acagagatat	gggaagaggg	aaagtagagc	tgaagaggat	agagaacaaa	60
atcaacaggg	aagtaacatt	tgcgaagaga	agaaatgggc	ttctcaagaa	agcttatgag	120
ctctctgttc	tctgtgatgc	tgagggttgcg	ctcatcattt	tctccaaccg	tggcaagctc	180
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ctgaagcaaa	ttcggctctg	aaagacccaa	ttcatgtttg	atcaactggc	tcctcttcag	480
cacaaggaac	aaatgctggg	tgaagctaac	agagaattaa	ggaagaagct	ggaagagagc	540
aatacaagaa	tccctctccg	ccttggtatg	gaagctgagg	atcacaataa	catttcatac	600
agccgccttc	ccc					613

## &lt;210&gt; 2020

## &lt;211&gt; 564

## &lt;212&gt; DNA

## &lt;213&gt; Eucalyptus grandis

## &lt;400&gt; 2020

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tgcgacaagc	gggacaccaa	caagggggcg	tgggtccaagc	aagaggacca	gaagctcatc	180
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aaccgggtgt	cgcttatagc	tgggaaggtg	ccgggacgta	cagataacga	agtcaagaac	420
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cggttgaaac	aaaatctccc	tcgctctcaa	acccggatgc	ctcggcagca	cttctctatc	540
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## &lt;210&gt; 2021

## &lt;211&gt; 410

## &lt;212&gt; DNA

## &lt;213&gt; Eucalyptus grandis

## &lt;400&gt; 2021

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ctctcgaaaa	cttcgttcac	caggctgacc	tcttgagaca	gcagacgctc	caacagatgc	180
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ctgctaaact	cttctgatgt	aatcgatagt	tttgattgaa	attaacgttt	ctagtggggg	360
tccatttact	gcgactgtag	cgattcgggc	cacatttata	taaaagctat		410

## &lt;210&gt; 2022

<211> 328  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 2022  
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 ttttagtctc tttacctctg tgtttgatgt gaatattgtc cgatgtctct gatgttctta 180  
 cttcatcttg ttggcagtgg taaaatgtca gtttcgtgtc tgttgactgg attggctctc 240  
 tttttgttac aagggggtgt cgtttttcac cctcattagc ttgtgaaatt tgcattgatga 300  
 tgaatgggtt taacaaacct atattagc 328

<210> 2023  
 <211> 380  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 2023  
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 gctagcgcta aacccccctc actcttcacc agcaaaaacg ccttttctcg cacacaaatg 120  
 ggtagcgtg aaattgaaat acagccaata acgcacgagc gaaaccgatc tgtcacattc 180  
 ctcaagcgca agaacgggct gttcaagaaa gcgtatgagc tcggtgtgct ctgctctgtc 240  
 gacgtcgctg ttatcatctt tgaggatcgc ccagggcaca gcccacagct ctaccagtac 300  
 tcgtctcgcg gtatccagga tattgtgcag aggcattctc atcacgacgg cgagactgat 360  
 aaccgtggcc ctggggactt 380

<210> 2024  
 <211> 322  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 2024  
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 tctaggagct atgtgaccac aagaacaccg gccaggttg caagtcatgc tcagaaatat 120  
 ttcttcggc aagttagctt caacaagaaa aagcggcgct cgagcctctt tgacatggta 180  
 aaaaatcagt gctcctataa actattacca tcatatcgcg tatcatcaat tagtttgatg 240  
 ggggttgata aattcttatt gtataagggt gatgtcaaaa ccgcggcggg tgatcgttta 300  
 ggcagtttga cggccaagcc ga 322

<210> 2025  
 <211> 387  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 2025  
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 gatggcaagg cctggcgaca atggagtcca tgaagaaatg tcacaattca ctagttaagg 180  
 tctcgccagt agtgcggctg ctggaaacga tttcatattc tctagtaagc ctgctggttc 240  
 atcgtagat tttattggaa ctagacctac tcagctacag caacaaccac agccacagcc 300  
 gcttgaacca cgggtccgc tttttccaaa gccggaaact gtgtcatttg caacctccgt 360  
 gcatctacca aatacagctt catatag 387

<210> 2026  
 <211> 450  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 2026  
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 gccacctcca cgacgtcggc gaccacgccg gcggcggcg gcgacggcgg caagaaggctc 120

aggaagccct	acacgatcac	caagtccagg	gagagctgga	ccgaggagga	gcacgacaag	180
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tcaaagactg	tcattcagat	ccgaagccat	gccagaaat	acttcttgaa	agtccaaaag	300
aatggggcag	ttgcacatgt	tccacctcct	cgtcctaaac	gcaaagctgc	tcacccctac	360
cctcaaaagg	catcgaaaaa	tgttttagtg	ccgctgcaag	catccatggc	ccagccttct	420
tcaacaaatc	ctgcttttac	aattacacct				450

&lt;210&gt; 2027

&lt;211&gt; 786

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2027

ccaaacatcc	atccgtccat	cagctctaaa	ctttaattgt	aatcacatcg	tcctttctcg	60
acaccaactg	ggtcaaatgc	ttaaaaaaag	gaaaaggaaa	agagaaagat	gacgtttcct	120
tccttcctct	ccaccaccgc	tctcttctat	ttatctcctc	tctctctttc	ttcctccatg	180
agcggtgctc	ttcaggttgg	atgcaccact	tcaactcaac	ctcaatacat	aaacgtcgtg	240
ttgggaaaag	gataaaggca	gggagaagga	gatggggagg	tcaccgtgtt	gcgagagcga	300
gcacatgaac	aaaggggcat	ggagcaagga	ggaggacgag	cgcctcatcg	cctacatcaa	360
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ccacatcaag	agaaagcttc	acgcacgcgg	gatcgatccc	caaaccacc	gtcctcttcg	660
actacaccag	cactgctggt	gctggtgctg	ctgccacttc	acactatctg	ttctaacgct	720
aacaacagcg	gcaacaaggc	cacgcctcac	tcgacgactt	gtgaagaatt	atcatcatca	780
tcaaca						786

&lt;210&gt; 2028

&lt;211&gt; 476

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2028

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agtggagaaa	aatgagcaca	aatggtttgc	tgaagtttga	ccaaagtctt	tagtgagatg	120
gttgctgtct	ccggttctcc	tccaaacaga	tgtctgatca	aataacttac	ttgaccgcca	180
gtatgaactc	tccttttagcc	cagcttggtt	acccaagaag	gatgcacacc	tacgagccat	240
ttgaccagtt	ccccatgtgg	ggagacacct	tcaaagctga	caaggtaaaa	aatctcgagg	300
catcgtcatc	tgtgatcgtg	catgcagtag	atgatggatt	ggacaagaag	tttgaatatg	360
tttctcatga	atcggcagaa	aattccagct	ccaggagcga	tcaagaagca	aatagacctg	420
acaaggtaca	gagacgtcta	gcacagaacc	gtgaagctgc	tcgaaaaagc	cgtctg	476

&lt;210&gt; 2029

&lt;211&gt; 535

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2029

cagccggatg	taccttagtg	tactgaatag	cctaaagcca	tgttcctatc	agatgttaac	60
ttgcatatgg	aaatgaatat	tacaacatgc	gcgctttctt	gagttttttt	tcctcttgta	120
gttgcacgcg	aagaagcgct	gagttcttgg	tcaaagtcta	gcagtttccg	ggctctccatc	180
aatcgagtcg	gagtgaggag	tatgaactct	ccttttagccc	agcttggtta	cccaagaagg	240
atgcacacct	acgagccatt	tgaccagttc	cccatgtggg	gagacacctt	caaagctgac	300
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gacaagaagt	ttgaatatgt	ttctcatgaa	tcggcagaaa	attccagctc	caggagcgat	420
caagaagcaa	atagacctga	caaggtaacg	agacgtctag	cacagaaccg	tgaagctgct	480
cgaaaaagcc	gtctgcggaa	gaagaaatat	gtacaacaac	tagaatcaag	ccgct	535

&lt;210&gt; 2030

&lt;211&gt; 723

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 2030

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caccaccacc	accaccttat	actgtacaaa	taatcccttg	gcctcggccg	ttatagcctc	120
ttactcaaaa	atcagttttt	acccttttct	gttgcgtagt	cgtagttttg	ggccaggggt	180
tctattcggg	atatgtagag	aagtcagtgg	gcgaaaccga	gcgtcgagcg	gtcggccatg	240
gcttcctctt	cttctgtagc	ttccgcgagg	aaggacgcgg	atcggatcaa	ggggccgtgg	300
agccccgagg	aggacgaggc	gctgcagagg	ctgggtccaga	gctacggccc	ccgcaactgg	360
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acgtgctcgg	ccggcgggca	cgacgccgac	gccctcgcgg	agcagcagcc	gctcaagcgg	660
tcggccagcc	tcgggacgcc	cacgggcggc	aacaacgcgg	tctccgatct	gttcttcagc	720
ccg						723

&lt;210&gt; 2031

&lt;211&gt; 412

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 2031

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gctgtgatca	gacaaacaaa	aaccatctgg	ttcggcgtct	gaacaagaaa	aaatttgaga	120
agggattcaa	ggaagatggc	gaaagagaag	ataaagataa	agaagataga	caacttgacg	180
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tccgttctgt	gtgatgctga	cgtgtccctc	atcgtcttct	cagccactgg	caagctctat	300
gatttctcca	gctccaggca	gatgaaggga	gaggatctgg	aggggttaaa	cgtggaggaa	360
ttggaccaat	tagagaagaa	actcgaggcg	ggactgagcc	tcgtgatcaa	ga	412

&lt;210&gt; 2032

&lt;211&gt; 495

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 2032

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atcatccact	tgcattccat	ccttggcaac	aggtggtcgc	aaatcgcggc	tcggttgccg	360
ggacggactg	acaacgaaat	aaagaacttt	tggaaactga	ccataaagaa	gaggtcaaga	420
actcgtcatc	atcttcttgt	agacactcgg	caaacacgag	cgattctcct	tgtcatcaga	480
cgttaaagat	gtatg					495

&lt;210&gt; 2033

&lt;211&gt; 220

&lt;212&gt; DNA

<213> *Eucalyptus grandis*

&lt;400&gt; 2033

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tccgaggtca	atttccggat	cccggaggac	ctggatctgg	ggccggatcc	gttcgagaac	120
gggccctccg	ggagcttcga	ggacttcgga	tcggaggatg	atctactcag	cacctacatg	180
gacatcgaga	aattcggatc	aagctcgacg	cgggcagggg			220

&lt;210&gt; 2034

&lt;211&gt; 445

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2034

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cgctgtaaa	ctcgcccagc	atgtcctcat	cattggacct	gaagaattct	tgcatggatg	120
caaatgccaa	ccctgtgagc	atctttgcaac	ctgggtgtagt	gccacctgaa	gcctgggttac	180
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ttctttctgc	tgttttctca	agttgctctc	tacaatatca	tcgactttgt	ttctcaaaat	300
tcgctttgtg	taagaatgaa	agagaactga	aaagggagag	gaggaaacag	tcgaaccgtg	360
aatctgctag	aagatcaaga	ctgaggaagc	aggctgagac	tgaagaactt	ggcaaaaagg	420
tggattctct	gagtgccgag	aatag				445

&lt;210&gt; 2035

&lt;211&gt; 349

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2035

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&lt;210&gt; 2036

&lt;211&gt; 648

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2036

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ggacggcgga	ggaggacaag	aagctcatca	acttcaccc	caccaacggc	cactgctgct	180
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&lt;210&gt; 2037

&lt;211&gt; 268

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2037

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gatcggctaa	tctctaaaga	gagaaggaat	ttcgggtggg	tttgtggcgt	tactgaagag	120
gaagaagaac	ttattatcag	aatgtataag	ctcgtgggca	acagggtggc	attgattgct	180
gggcgccttc	ctggctgaaa	agctgaagag	attgagagat	attggaagat	gagaagcata	240
aatgctgcac	ctctgaagcc	taatacct				268

&lt;210&gt; 2038

&lt;211&gt; 1055

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2038

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ataacaccca	aagcctatcc	agccatggtc	gatggatggt	tggacagtga	tacaggcagg	120
agagggttca	gctggaccac	agttttggat	agaatggttg	cttttgctc	ctcggtctt	180
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ttggggattg	cgagacagca	gatccaagtc	tgggctgtgg	atctggaacg	cattttaagc	300
tctggtctct	tcaattgggt	ttctggtagc	gagctccatc	acaatgggtca	aagaattgtt	360
gatgatgtgt	tccaactgtg	ggcacagtgg	gcacagctcc	agagcctgtc	ctgatagagg	420
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ttctccaact	ttatctctag	gaagatccct	gcaaccagtg	gaagcagttc	ttgaagagaa	1020
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&lt;210&gt; 2039

&lt;211&gt; 167

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2039

tggttacagc	tctgtagcgg	aatagatgaa	catgcagctg	gattctgttc	tcaacttgtg	60
tttgaccaa	ttgatgcac	ttttgctgat	gatgctcctc	tggctccctc	tggtttccga	120
gtaattcctc	tagaatcggg	atcagaatgt	ttctcctcca	aaacgga		167

&lt;210&gt; 2040

&lt;211&gt; 357

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2040

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gagaacggga	ccagcaggca	ggttactttt	tgtaaagcga	ggaatggtct	gctgaagaaa	180
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tgttcagaag	gaagtaacct	gacgagtaca	gcaaaagagc	aagacgtcca	gtgttta	357

&lt;210&gt; 2041

&lt;211&gt; 438

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2041

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attcaacttc	atgcactact	tggaaacagg	tggtcggcca	ttgctactca	ccttcccaag	240
cgaaccgaca	acgaaatcaa	aaactactgg	aatacccacc	tgaagaagcg	cttgctgcag	300
atgggaatcg	accccgtgac	gcacaagccc	aagtccgaat	cgattatggt	acctggtgtt	360
cagtcgtcca	atgggtcctc	gaatctgagc	catatggcgc	agtgggagag	cgcgcgcctg	420
gaagccgaat	cgaaggct					438

&lt;210&gt; 2042

&lt;211&gt; 319

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2042

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aatgaactga	ggtcagcagt	gaactcacat	gtgggggaca	atgagctgcg	tggtctggtt	180
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&lt;210&gt; 2043

&lt;211&gt; 404

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2043

aaccggagag	caagaacaaa	gtggaaacgc	aacgaagtgg	agtgcgataa	tctgaaacgg	60
tgttgcgaga	gtctgagggg	ggagaacaga	agattggaga	aagaagtgca	gtcgtgaga	120
gccatgaaag	tcccgagtc	acccaattcg	atgcctctgg	cagccgccac	cctcgcaatg	180
tgccggcct	gcgaggcct	tgcaatcaag	aaccgcggcg	ccgccacttc	ctccaccgcg	240
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aataaccaa	ccccttcaat	gggaatggga	gatgaaatga	attgaagaaa	gtgaacttaa	360
aaaaaaaaa	aaaaaaactc	gagactagtt	ctctctctct	cttc		404

&lt;210&gt; 2044

&lt;211&gt; 379

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2044

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gtttaatcag	ttggacccaa	gaatcaaccg	aaggcctttc	actgaagaag	atgaggagaa	120
gctactggca	gcccacgtt	tatatgggaa	taaatgggcc	atgattgctc	gcttatttcc	180
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tgctgcact	gatgatgaaa	cgaggatggg	cagcagcagc	tgcaacatgt	gggtggataa	360
atatagctct	ctcaaatct					379

&lt;210&gt; 2045

&lt;211&gt; 369

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2045

ctcattgctt	acattcgagc	caacggcgaa	ggcagctggc	gttcccttcc	caaggctgca	60
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aagaactact	ggaacactca	catcaagaga	aaattgctga	tcaagggaat	cgacccccag	300
tcccatcgtc	ctctcgggca	gccctacagc	agcaacaata	tgcccgtctc	tcggctatct	360
ctgacctcg						369

&lt;210&gt; 2046

&lt;211&gt; 530

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2046

ctttccaata	ttgagcccaa	gcaaatcaaa	gtttggtttc	agaatcgaag	gtgccgagag	60
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aagttgctca	tggaggagaa	cgatcgcctt	cagaagcaag	tttcacagtt	ggtgtatgag	180

aatgggttaca	tgagacagca	gctacagaat	gcattctgtgg	ccgccacaga	cacaagctgt	240
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gatgctagcc	ccgctggact	cctgtctata	gcagaggaga	ccttgacaga	gttcctttca	360
aaggctaaag	gagctgctgt	cgattgggtc	cagatgcctg	ggatgaagcc	tggtccggat	420
tcgattggta	ttgtagctat	ttcaaatact	tgtaattggag	tagctgcacg	tgcttgcggt	480
cttgtaggat	tagatcctac	aaaggttgca	gagatcctta	aagatcgccc		530

&lt;210&gt; 2047

&lt;211&gt; 358

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2047

gctctaccag	tgtaagcct	tggttgaaaa	tggcgcagtc	gaaaaactct	caagaacctta	60
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gtgcagattt	cgacgcgtct	caaagcagtg	gaataatctc	ctgtcatcac	acaatttcat	180
aaaaaaggta	tgagaaaga	agcctgctaa	catgaacca	tggtcgttc	tgcatcctgt	240
caactcctcc	tattgtttgg	catactgctt	cttcacaaga	acctggaaga	ctacctcctc	300
tatctccatt	gaaaatgcc	ataattatgg	agaaaacgga	atcttgggga	tcagctgc	358

&lt;210&gt; 2048

&lt;211&gt; 376

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2048

aagacaagaa	gctcattaat	ttcctgacta	ctcatggcca	atgctgctgg	cgcaccgttc	60
cagagcttgc	cggtatttca	agatgcggaa	agagttgcag	gctgagatgg	acgaattatc	120
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tcgacccccg	cgacgcacag	gctatttcag	aaacactacc	acagccagcc	cctgtagctg	360
agaataatga	tgcccc					376

&lt;210&gt; 2049

&lt;211&gt; 656

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2049

caaacaatca	tcacgagatg	aaattccctt	cagaatggga	tttctgagat	tcgatccttg	60
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aatggcatcg	atgaaaggaa	aatctccggg	tcacgatgag	cccgatcgga	tcaaggggccc	180
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gtgcaaccag	ctgagcccc	aagtcgagca	ccgccccctc	actcctgaag	aggacgccac	360
tatcgtgaga	gcccacgccc	agcacggcaa	caaattgggc	acgattgcgc	gcattgctcag	420
cggcagaacc	gacaacgcta	tcaagaacca	ctggaactcc	actctcagga	ggcgttgcca	480
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acggaacctc	agcgaagacg	ccgatgccag	ccggaaattc	aagaagctca	gcctcgggac	600
gacgacaacg	accacgacca	cggagcctag	cacctcctcg	gcctcggatc	ggagcg	656

&lt;210&gt; 2050

&lt;211&gt; 466

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2050

atggggaaga	cgaagatgga	gatgaaacac	attcaaaacc	ctagccgccg	ccaagttact	60
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gctgaagtcg	cccttatcat	tttctcgga	actggcaaga	tcagcgagtt	tgcaagccac	180



aacgacatgg	caacaatact	ggaaaaatat	cgcataataca	cgcaaacaga	aacagatgga	240
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gcgggattca	gtgtttgtgg	atgatcccta	ttattgcagt	gtgggttggg	gcacgagggg	360
tgcagttgac	tgcactcata	tgattggaag	gttggtgaat	cacaattgaa	agcgttgcac	420
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&lt;210&gt; 2051

&lt;211&gt; 390

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2051

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ctaccagggg	aacgcggcgc	catgtcttcg	aggagctgtt	cgttgtgcgg	ccttaatggc	120
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cattcatcca	gcaatgccc	tgagaggaag	aggggagtg	cctggacaga	ggaagaacac	360
cggatgtttc	ttgtcggcct	tcagagagtc				390

&lt;210&gt; 2052

&lt;211&gt; 312

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2052

gtttgaagg	gaacgcggcg	ccatgtcttc	gaggagctgt	tcgttgtgcg	gccttaatgg	60
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tggaccaatg	agaaagagt	ctagtatgaa	taatttgtca	aacttatctc	aatatgagca	180
ctcggatccg	gctgaggttg	ccgctgaagg	ttttgatggg	tacgtctcgg	atgacctcgt	240
tcattcatcc	agcaatgccc	gtgagaggaa	gaggggagtg	ccctggacag	aggaagaaca	300
ccggatgttt	ct					312

&lt;210&gt; 2053

&lt;211&gt; 393

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2053

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&lt;210&gt; 2054

&lt;211&gt; 210

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2054

cacagttctg	gaacctgtta	aagagaaatc	agtcgaggtc	aaactccttc	tgtttgcacg	60
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tataatgaat	gctcaaagcc	cagcacaagg				210

&lt;210&gt; 2055

&lt;211&gt; 385

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2055

aaaattgaga	atactacaag	ccggcaggtt	acattctgta	agcggagaa	tgggttgctg	60
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caaataatgg	gtgaaggcct	tgaatcatta	agcatgaagg	agctcaagca	tattcaagtt	360
caattggaaa	aaagtattag	ttgtg				385

&lt;210&gt; 2056

&lt;211&gt; 545

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2056

tgaagacctt	gatgattgta	tccatccacc	ggagaagaag	agaaggctga	ctgctgacca	60
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tggtc						545

&lt;210&gt; 2057

&lt;211&gt; 385

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2057

aaacttgctc	acggattccg	acccttccg	ctaaagctgc	tgcatttctg	tgtgtattga	60
agatggggag	atctccctgc	tgtgaaaaag	ctcatacaaa	caaaggggag	tggaccaag	120
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aactccactc	cctactcggc	aacaagtgg	ctcttattgc	aggcagattg	cccgggcgga	360
cggacaacga	gataaagaac	tactg				385

&lt;210&gt; 2058

&lt;211&gt; 436

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2058

aaagaagggt	gttccctgga	ctgaagaaga	gcacaggcag	tttttgatgg	gccttcgcaa	60
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&lt;210&gt; 2059

&lt;211&gt; 624

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

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 <212> DNA  
 <213> Pinus radiata

<400> 2060  
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 gtct 364

<210> 2061  
 <211> 258  
 <212> DNA  
 <213> Pinus radiata

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<210> 2062  
 <211> 347  
 <212> DNA  
 <213> Pinus radiata

<400> 2062  
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 gaaaaggtag gctcttttga agaggagaat agtgaacttc ttaccaagtt gattcctaga 180  
 gccgattcct ccacttctgg ggctgcgtta tttgttgata catccatgcc aaaatctcac 240  
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<210> 2063  
 <211> 267  
 <212> DNA  
 <213> Pinus radiata

<400> 2063  
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<210> 2064  
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 <212> DNA  
 <213> Pinus radiata

<400> 2064						
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<210> 2065  
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 <212> DNA  
 <213> Pinus radiata

<400> 2065						
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gcaagtctca	acgggaaaat	aacgctgaaa	taccaagaaa	agttgccgat	ggcgcagttg	540
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<210> 2066  
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 <212> DNA  
 <213> Pinus radiata

<400> 2066						
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<210> 2067  
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 <212> DNA  
 <213> Pinus radiata

<400> 2067						
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gtggagcaca	gaccttttac	cccgtccgag	gatgctgcta	ttctgca		407

<210> 2068  
 <211> 353  
 <212> DNA  
 <213> Pinus radiata

<400> 2068  
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 ttgggcttct acacatcttt cccggaagta gatggggcgg gcactaggaa gaacagaaat 180  
 aaagaggata gaaaatgaag tgagcaggaa tgtgagtttt agaaagagac gacgtggatt 240  
 gctgaagaag gctgcggagt tgtcaatact ttgcgatgca acagtgggcg ttgttgtttt 300  
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<210> 2069  
 <211> 393  
 <212> DNA  
 <213> Pinus radiata

<400> 2069  
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 accggcagga tttacgagtt tgcaagccac gatgatgtga ccacagtatt ggcaaaatac 180  
 cgaatacaaaa cgaaaactgc cggaaacgca atgccttcat cgcttcaaaa aacagagttt 240  
 gatcaattac aagtcaggat gttgcaggag aagatagaca atttggagaa aacgaaaaag 300  
 catatggtcg gtgacaattt ggagtcactg acgtggaagg aattgcaaca agtcgaaaag 360  
 aaattaagca aggctacaaa aataattgtg gcc 393

<210> 2070  
 <211> 461  
 <212> DNA  
 <213> Pinus radiata

<400> 2070  
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 aatcacaaaca aaagcccaaa gcgtggtaaa ttacgaaatt agaattatat tatcattaaa 180  
 aaaaaaccct attttcattg tatagcagta ggcttgattt actgctatga tagcggaggt 240  
 tttattgggc aaacaaaccc tactgggtata ttagaccttc ttgtcgacaa agtttaattg 300  
 cataaatctt gtatgctaata ctggccgcta aaagagcgat ggaaaaatag ttgtccatt 360  
 cacaacacat gatatgttta aatccaacgt gtatgtgtct gcaaaatatt attatacact 420  
 acggtttatc acatggtagt cgattcgcca taaaaaaaaa a 461

<210> 2071  
 <211> 373  
 <212> DNA  
 <213> Pinus radiata

<400> 2071  
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 gcctcatcgc ccacattcga actcacggcg aagggttgctg gcgctcgctt cccaaggccg 180  
 cagggtgat gcgctgcggg aagagctgca ggctccgatg gataaactac ctgcgtcctg 240  
 atctgaagcg tggaaaacttc tcagaagaag aagacgaact catcatcaaa ctccactccc 300  
 tactcgga caagtggctt cttattgcag gcagattgcc cgggcggacg gacaacgaga 360  
 taaagaacta ctg 373

<210> 2072  
 <211> 506  
 <212> DNA  
 <213> Pinus radiata

## &lt;400&gt; 2072

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cagggagaac	tgataacgag	atcaagaatt	actggaacac	gaggatcaag	aagaaactgc	300
gccagatggg	aatcgatcct	gtgactcaca	agcctctcac	ccaaatgcaa	atgcagagca	360
ccctgcccc	gactctgctg	ctgcaagaaa	atgatacaga	gcagcagcag	caggagcaac	420
ataatgagcc	tgatcctgat	cagaatcaga	gcagcaatgg	cactgtggag	acattgggtct	480
cgagggccag	agaacccac	gaccac				506

## &lt;210&gt; 2073

## &lt;211&gt; 494

## &lt;212&gt; DNA

## &lt;213&gt; Pinus radiata

## &lt;400&gt; 2073

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atgctgttat	atatecttcc	ttgctgcaac	ttgaaggagg	tataacagag	atggaagata	120
ataagcagaa	actgatttgc	aaagaaagat	acaagaaacg	tgttgatgaa	gaaaggagac	180
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ccaaagtgtg	attgcctaac	tgcatgcatg	caatgtgttt	gaattgctat	cggaatggc	300
atgcacgatc	agaatcatgc	cctttctgca	gggatagctt	gaaaagagtg	aactcaacag	360
acttgtggat	ttttacaagt	aatgaagaag	ttgttgacat	ggaaacattg	ggcagagaga	420
acttaaaaag	gctatttaat	tacattgata	aattgccact	tatagtgcc	gagagcctgt	480
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## &lt;210&gt; 2074

## &lt;211&gt; 1678

## &lt;212&gt; DNA

## &lt;213&gt; Eucalyptus grandis

## &lt;400&gt; 2074

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tggaagagag	agaatctagt	ctctggatgg	ggaggcattc	ttgctgttac	aagcagaagc	240
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ggtcagttga	attgctgagc	cagctcaatc	cacaattctc	aagctccacg	acagcaagga	720
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<210> 2075

<211> 636

<212> DNA

<213> Eucalyptus grandis

<400> 2075

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ccggagggaag	acgaggtcct	cgccagctac	gtgaggaggg	aaggcgaggg	gcgggtggcgg	180
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caaggaattg	atccccggac	tcacaagcca	ttattgaacc	ataaccctag	ttcttacta	480
gcagcccatt	tgcaagatac	ttataatgct	tcaacattca	caccgaaagc	aacttacctc	540
aatcctacag	taccagtgga	agaaaccggc	gacgaaaatg	atctgaaagt	gggcagacag	600
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<210> 2076

<211> 862

<212> DNA

<213> Eucalyptus grandis

<400> 2076

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cggagaggca	acatcactac	tgaggagcag	ctcctgatca	tggaaactgca	tgccaagtgg	300
ggaaacaggt	ggtctaaaaat	tgcaaagcat	cttcccggaa	ggactgacaa	tgagataaa	360
aacttctgga	ggactagaat	ccaaaagcac	atcaagcaag	cagaggcttt	ctctggtcag	420
agctccgaga	tgagtgatca	agcaagcaca	agccacatgt	ccagcatgcc	agagccgatg	480
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aatttgctcg	tcgagtcaaa	tgaagcctac	tggagcatgg	acgatctttg	gtctatgcag	600
ttactcaatg	gggattgatc	gcggggtgac	gtatggtgca	gtaatcgaaa	tggttcgttt	660
acaataatag	ctaggtttgt	ttacataaaa	tggacattag	cttttatctc	acatatatat	720
ctacatacat	gtgctagtgt	agaagttatc	tacaaatatg	tgcatgagtt	gtaaaccgaa	780
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<210> 2077

<211> 907

<212> DNA

<213> Eucalyptus grandis

<400> 2077

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aaaaaaa						907

<210> 2078  
 <211> 658  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 2078						
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gtgtcctcta	gaaggatggg	gatgtatgac	ccgattcacc	aaattggaat	gtgggacgag	300
aacttcaagc	agaatggaaa	tcctaatacg	ccgccagctc	tgatcatacc	tatgcacgcg	360
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gagcaagaaa	catcgaaacc	ttatgataag	gtgcaaagac	gtcttgccca	aaaccgtgag	480
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<210> 2079  
 <211> 373  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 2079						
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<210> 2080  
 <211> 421  
 <212> DNA  
 <213> Pinus radiata

<400> 2080						
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gattttccga	tataatgatt	ttcgattttc	cgtttatata	taatgtttct	tgattttccg	360
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<210> 2081  
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 <212> DNA  
 <213> Pinus radiata

<400> 2081						
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gctggcgcg	gagtccaagc	tcagggcaag	gggcctctgg	tctgcccagt	tgagaaacgt	720
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&lt;210&gt; 2082

&lt;211&gt; 244

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2082

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aatacatctg	aattcatggc	gatggtgggt	ggagaagtct	ccccaaaaaa	gcagggctta	180
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gcgg						244

&lt;210&gt; 2083

&lt;211&gt; 1151

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2083

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aaaaaaaaaa	a					1151

&lt;210&gt; 2084

&lt;211&gt; 372

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2084

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372

<210> 2085  
 <211> 1285  
 <212> DNA  
 <213> Pinus radiata

<400> 2085  
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 aagctgatatg attacatata aagccatggc catggtagct ggcgtgccct tcctaaacga 180  
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 aaaaatatgg gcaaccacc atggatacag cagcctggaa tggccttaga ctataaggggt 720  
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<210> 2086  
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 <212> DNA  
 <213> Pinus radiata

<400> 2086  
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<210> 2087  
 <211> 473

<212> DNA  
<213> Pinus radiata

<400> 2087  
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aagtggctct taattgcagg gagattgccc ggacggacgg acaacgagat aaagaactac 360  
tggaacacac acatcaaaag aaaattgctg agcaaggacg tcgaccccca aaccatcgct 420  
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<210> 2088  
<211> 1150  
<212> DNA  
<213> Pinus radiata

<400> 2088  
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aagaggacga tcgcctcatc gccacattc gaactcacgg cgaagggtgc tggcgctcgc 180  
ttcccaaggc cgcagggtcg atgcgctgcg ggaagagctg caggctccga tggataaact 240  
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cggacaacga gataaagaac tactggaata ctcacatcaa gagaaaattg ctaaacaggg 420  
gactcgacc cagtccecat cgccctcgc gccagccgca caacagcaac acgacctgcc 480  
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cggtttcttg tcacatgggg ttgcaagtaa attatggtgt gcaatgtgag aacagatatt 780  
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tcgctgtttc accatggcgc tctgtaatat ttaaagcgat tcatatggaa gcttgagcgc 1080  
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aaaaaaaaa 1150

<210> 2089  
<211> 723  
<212> DNA  
<213> Pinus radiata

<400> 2089  
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ctcgcccgcc attctatcag gtgtattatt gtgcaacata tagctgaaat atggtttggg 180  
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tccaacaagc actgccatgc tttatcctga ctgggctgca gcattccagg cttattataa 360  
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acagcctcat ccatatatgt ggggggggca gcctctaatt cctccatatg gaactcttcc 480  
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gggtgcacat ccatttgctc cttatgtgat gacatcgctg ttaagtacaa ctgaaggtgc 600  
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aactctattg aagaggtcca aaggaagctt aggcagctt aatatgctta ctggcaagat 720  
tac 723

<210> 2090

<211> 768  
 <212> DNA  
 <213> Pinus radiata

<400> 2090

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gagccaacga	agggttcaag	ttcgattcca	ctagggtccag	gaggagcaaa	gaagatcggt	180
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cgagtcaaag	gaatccctga	gccaggggca	tctccccgtc	ccccacatat	atggcgatcc	420
actgctcccc	gcgcctcccc	tgctccgct	actccctcct	ccgcgccag	atgagcacc	480
cgctcgcccc	ctggagcgct	ctgccagtgc	accggccatc	gccttacagc	aacaggcgga	540
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tccacctccg	cgctccgctc	cttcatccag	cgaaccccca	ccgctccgc	tgctccgct	720
gacgaatcag	tgggacttct	ttgacgacaa	cagctacttc	gagcggca		768

<210> 2091  
 <211> 479  
 <212> DNA  
 <213> Pinus radiata

<400> 2091

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aatgattgag	aacgcaacaa	acaggcaagt	caccttctct	aagagaagag	ggggacttaa	180
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cagcaccggc	aaactccatg	agtgttcaag	ctcgagctca	ttctttatgt	tacaaaaaag	300
catgaagaaa	attctcgaga	gataccagaa	atcagagcag	ggactaggac	tcattggatta	360
tcaacatcaa	cagctgttgt	gtgaaatgag	acgaatcacc	aaagaaaatg	aaagccttca	420
agagcgttta	aggcatatga	atggcgagga	agtcaattca	ttgaagctcc	cagagcttt	479

<210> 2092  
 <211> 557  
 <212> DNA  
 <213> Pinus radiata

<400> 2092

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cagtgttatg	tgatgcagag	gtagcactga	taatattctc	aagcagagga	aaactctatg	180
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gccccttgag	tattaaggag	ctgcaacaac	tggaaactga	acttgagggt	gcactgacac	420
atgttaggtc	aagaaagact	caagtcattg	tggaaatgat	ggatgaacta	cgcagaaagg	480
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aggcattcaa	tgccatg					557

<210> 2093  
 <211> 356  
 <212> DNA  
 <213> Pinus radiata

<400> 2093

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aaaggggaag	ggagagaaga	ggagaacggt	gaggggaaaa	acccagttga	agaggattga	120
gaacgggacc	agcaggcagg	ttactttttg	taagcgcagg	aacgggtctgc	tgaagaaagc	180
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gaagcgctat	gagttcgcta	atcccagcat	gcagaaaatg	ttggcacggt	acgaaaattt	300
ttcagaagga	agtaaagcaa	cgagtacagc	aaaagagcaa	gatgtccagg	gttttaa	356

<210> 2094  
 <211> 404  
 <212> DNA  
 <213> Pinus radiata

<400> 2094						
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tttctaagcg	cagaaatgga	ttgatgaaga	aagcttacga	gctgtcggtg	ctctgcgatg	120
cccaactggg	actgattgtt	ttctccccc	gagggaaagg	ctatgaattc	tccagtacct	180
gcatgcagaa	aatgttggca	cgatacga	aatgttcaga	aggaagtgc	acgagtacat	240
caaaagagca	agatgtccag	tgtttaaaac	gagaaagtgc	gaatatggaa	gaaaggattg	300
aaattcttga	atccatgcaa	agaaagatgt	tgggcgagga	gctggcatca	tgtgcattga	360
aggatttgaa	tcagttggag	agccaggttg	aacgaggttt	gaga		404

<210> 2095  
 <211> 584  
 <212> DNA  
 <213> Pinus radiata

<400> 2095						
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aatagtaacc	agagaatagc	agcgggtgaa	gaagcagagg	gatcttgcaa	tggggcgggg	180
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ccggaacgga	ctgctgaaga	aggcgtagca	gctatcagtg	ctgtgcgatg	ccgaagtggc	300
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gacgttggaa	agatacga	aatgttcata	tgcaatgcaa	gataccacag	gcgtttcgga	420
ccgggaagca	cagaattggc	accaagaagt	tacaaagttg	aagggtaagg	ttgagctcct	480
gcagcgatca	caaaggcatt	tggtggggga	agatctgggt	ccgttaaattg	ttaaggagct	540
acagcagctt	gaacgtcagc	tggaggttgc	tctgacacat	ctta		584

<210> 2096  
 <211> 453  
 <212> DNA  
 <213> Pinus radiata

<400> 2096						
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ggcggttcgag	ctttctgtcc	tctgtgatgc	tgaagtcgct	ctcatcattt	tctctgaaac	180
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cttgattggg	gaagacttgg	aggtattaac	aatgaaagaa	ctgcaacggc	ttgaaaaaca	420
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<210> 2097  
 <211> 509  
 <212> DNA  
 <213> Pinus radiata

<400> 2097						
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ggaggtgaaa	ctcattcaaa	accctaccag	tcgccaaagga	tgtttctaca	accgcaagtg	180
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aatcttctcc	caaacgggca	agatttacga	gtttgcaagc	catgacgacg	tcaacgcaat	300
tctcgcaaaa	taccggatac	aaacgggaac	aacaacaaac	gcgatgcctt	cctcgcttca	360

aaacaccgag	cgggagacgt	tgcattgagga	gacaaatatg	ttgggaaaaa	ggaaaaaagt	420
ggagaagttg	catgagaaga	tcaatatgtt	ggaaaaaaga	ggaaaaaaca	tggttggtga	480
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<210> 2098  
 <211> 430  
 <212> DNA  
 <213> Pinus radiata

<400> 2098						
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aaggagtctg	gagaatggca	agaggaaaga	cccagatgaa	gaagattgag	aacgtgacca	120
gcagacaggt	cacgttttct	aagcgaagaa	atgggttgct	gaagaaggct	ttcgagctct	180
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gtggtataaa	taatgcggct	aaagagaaaag	atactcagca	ttcaaacgc	gaaattgcaa	360
atatggaaga	gaaaattagg	atcctcgaat	caacagaaaag	aaagatgttg	gggcaaaatc	420
tagcatcatg						430

<210> 2099  
 <211> 513  
 <212> DNA  
 <213> Pinus radiata

<400> 2099						
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aggggaaaaa	cccagatgaa	gaggattgag	aacgcgacca	gcaggcaggt	tacttttct	180
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<210> 2100  
 <211> 526  
 <212> DNA  
 <213> Pinus radiata

<400> 2100						
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agagcttgag	taatatttct	gcaaaaaccc	aagtaaacc	tgaagctagt	ccaaactagt	120
ggaagggaac	tcggctattc	tgtaagttca	ctcagatttt	gagaaactct	tggtattttg	180
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tgcatgagc	atgtagcgct	cattgttttc	tcgagccgag	gaaagtgtga	cgagctgggc	360
accagcaaca	acaacaacaa	cagtatgagg	tcaatattgg	aaagatatca	aaagtgttca	420
cagacggcaa	aacatatgaa	cttttcgaat	aatacttcag	acgagaaaat	gaagcaagaa	480
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<210> 2101  
 <211> 295  
 <212> DNA  
 <213> Pinus radiata

<400> 2101						
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gccaggtcat	cctccatta	gccatactg	tggaacatga	agagtttttg	gaggttatca	120
agttggagaa	tcattggcctg	acacaggaag	aagctttgct	atcgagggat	atgtttctgt	180
tgacgctttg	tagtgggctc	gatgaaaatg	cagttggggc	ctgtgctgaa	cttgtctttg	240

ctccaattga tgcatacctta gctgacagtt ctcttttgcg cccttctggg ttacag 295

<210> 2102

<211> 296

<212> DNA

<213> Pinus radiata

<400> 2102

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ttttactaat	tcatttgaat	tgatgatctt	gccattttga	ttggacagct	ttgtagtggg	180
ctcgatgaaa	atgcagttgg	ggcctgtgct	gaacttgtct	ttgctccaat	tgatgcatcc	240
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<210> 2103

<211> 475

<212> DNA

<213> Pinus radiata

<400> 2103

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acacttctgt	attggaagat	ggtagtcttg	tggtttgcca	gagatccttg	agtggaaactc	180
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<210> 2104

<211> 1612

<212> DNA

<213> Eucalyptus grandis

<400> 2104

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ctcggaatc	ggccgggaga	agaggaggaa	gacgacgaat	cggagcctta	tggtgtccgt	180
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1612

<210> 2105

<211> 1576

<212> DNA

<213> Pinus radiata

<400> 2105

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cacattcgag	cccacggcga	agggggctgg	cggttcgcttc	ccaaggccgc	agggctgctg	180
agatgcgcca	agagctgcag	actgcgatgg	ataaactacc	tgcgtcccga	tctgaagcgt	240
ggaagcttca	ccgaagaaga	agacgagctc	atcatcaaac	tccactcctt	cggttggaac	300
aagtggctct	taattgcagg	gagattgccc	ggacggacgg	acaacgagat	aaagaactac	360
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aatcccacgc	tgcttcagcc	tgcaacaaga	tatctttact	ctcattacac	tgatacatat	1200
cactgggtcaa	aacttcccat	cactgtcata	ggctggaaca	gagaaactga	agcctgttca	1260
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<210> 2106

<211> 210

<212> DNA

<213> Pinus radiata

<400> 2106

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cagagtgggc	tgattgtaac	attgatgctt	attcttcagc	taccatgaaa	gcaaatgctt	120
acaatgttcc	aggttcactg	ggaggcatta	cagggagtc	agttatcctt	ccactggcac	180
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<210> 2107

<211> 27

<212> PRT

<213> Pinus radiata

<400> 2107

Met	Lys	His	His	Val	Val	His	Asn	Cys	Cys	Ser	Lys	Lys	Ala	Val	Lys
1				5				10						15	
Arg	Gly	Phe	Trp	Ser	Pro	Glu	Glu	Asp	Leu	Lys					
				20				25							

<210> 2108

<211> 126

<212> PRT



&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2108

Gly Ile Ser Arg Asn Phe Val Lys Thr Arg Thr Pro Thr Gln Val Ala  
 1 5 10 15  
 Ser His Ala Gln Lys Tyr Phe Leu Arg Arg Thr Asn Gln Asn Arg Arg  
 20 25 30  
 Arg Arg Arg Ser Ser Leu Phe Asp Ile Thr Thr Asp Ser Tyr Phe Gly  
 35 40 45  
 Val Ser Ser Ser Thr Met Glu Gly His His Gln Ala His Gln Val  
 50 55 60  
 Pro Ser Phe Pro Leu Ser Leu Pro Pro Ala Val Ser Pro Gly Thr Gly  
 65 70 75 80  
 Glu Lys Leu Leu Glu Ser Leu Arg Leu Arg Lys Glu Gly Cys Gln Ser  
 85 90 95  
 Lys Pro Thr Pro Ser Lys Pro Ile Arg Pro Val Pro Ile Leu Pro Ile  
 100 105 110  
 Pro Pro Ser Ser Lys Met Ala Ala Leu Asp Leu Asn Lys Ala  
 115 120 125

&lt;210&gt; 2109

&lt;211&gt; 130

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2109

Met Pro Gly Phe Thr Arg Ala Arg Lys Met Ser Met Ser Gly Glu Glu  
 1 5 10 15  
 Glu Gly Asp Leu Arg Arg Gly Pro Trp Thr Arg Glu Glu Asp Asn Leu  
 20 25 30  
 Leu Ile His Ser Ile Thr Cys His Gly Glu Gly Arg Trp Asn Met Leu  
 35 40 45  
 Ala Lys Ser Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg  
 50 55 60  
 Trp Leu Asn Tyr Leu Arg Pro Asp Ile Lys Arg Gly Asn Leu Thr Pro  
 65 70 75 80  
 Gln Glu Gln Leu Met Ile Leu Glu Leu His His Lys Trp Gly Asn Arg  
 85 90 95  
 Trp Ser Lys Ile Ala Gln Tyr Leu Pro Gly Arg Thr Asp Asn Glu Ile  
 100 105 110  
 Lys Asn Tyr Trp Arg Thr Arg Val Gln Lys Gln Ala Arg Gln Leu Asn  
 115 120 125  
 Ile Glu  
 130

&lt;210&gt; 2110

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2110

Cys Cys Asp Lys Val Gly Leu Lys Lys Gly Pro Trp Thr Pro Glu Glu  
 1 5 10 15  
 Asp Gln Lys Leu Leu Ala Tyr Ile Glu Glu Asn Gly His Gly Ser Trp  
 20 25 30  
 Arg Ala Leu Pro Ser Lys Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys  
 35 40 45  
 Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Ile Lys Arg Gly Lys  
 50 55 60  
 Phe Ser Leu Gln Glu Glu Gln Thr Ile Ile Gln Leu His Ala Leu Leu  
 65 70 75 80

Gly Asn Arg Trp Ser Ala Ile Ala Thr His Leu Pro Lys Arg Thr Asp  
                                   85                                  90                                  95  
 Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Leu Lys Lys Arg Leu Ala  
                                   100                                  105                                  110  
 Lys Met Gly Ile Asp Pro Val Thr His Lys Pro Lys Asn Asp Ala Leu  
                                   115                                  120                                  125  
 Val Ser Ser Asp Gly Gln Ser Lys Ser Ala Ala Lys Leu Ser His Leu  
                                   130                                  135                                  140  
 Ala Gln  
 145

<210> 2111  
 <211> 99  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2111  
 Arg Thr Leu Pro Lys Asn Ala Gly Leu Arg Arg Cys Gly Lys Ser Cys  
   1                                  5                                  10                                  15  
 Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Ile Lys Arg Gly Arg  
                                   20                                  25                                  30  
 Phe Thr Phe Glu Glu Glu Glu Thr Ile Ile Gln Leu His Gly Val Leu  
                                   35                                  40                                  45  
 Gly Asn Lys Trp Ser Ala Ile Ala Ala Gln Leu Pro Gly Arg Thr Asp  
                                   50                                  55                                  60  
 Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile Lys Lys Arg Leu Leu  
  65                                  70                                  75                                  80  
 Lys Met Gly Ile Asp Pro Val Thr His Ser Pro Arg Leu Asp Leu Leu  
                                   85                                  90                                  95  
 Asp Leu Ser

<210> 2112  
 <211> 59  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2112  
 Met Gly Arg Gly Arg Leu Gln Leu Lys Arg Ile Glu Asn Lys Ile Asn  
   1                                  5                                  10                                  15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Ala Gly Leu Leu Lys Lys Ala  
                                   20                                  25                                  30  
 His Glu Ile Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe  
                                   35                                  40                                  45  
 Ser Ala Lys Gly Lys Leu Phe Glu Tyr Ser Thr  
  50                                  55

<210> 2113  
 <211> 79  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2113  
 Val Lys His Asp Val Glu Thr Leu Ser Ser Lys Val Lys Met Ala Glu  
   1                                  5                                  10                                  15  
 Glu Thr Val Lys Arg Val Thr Gly Leu Asn Pro Met Leu His Val Met  
                                   20                                  25                                  30  
 Ser Asp Met Ser Ser Val Gly Val Pro Pro Phe Asp Gly Ser Pro Ser  
                                   35                                  40                                  45  
 Asp Thr Ser Ala Asp Ala Ala Val Pro Val Arg Asp Pro Lys His Gln  
  50                                  55                                  60

Phe Tyr Gln Thr Asn Ser Ser Asn Pro Ala Ser Ser Ala Asp Asp  
65 70 75

<210> 2114  
<211> 104  
<212> PRT  
<213> Eucalyptus grandis

<400> 2114  
Gln Val Ala Gln Leu Arg Val Glu Asn Ser Thr Leu Leu Lys Arg Leu  
1 5 10 15  
Ser Asp Ile Ser Gln Lys Tyr Asn Val Ala Ala Val Asp Asn Arg Val  
20 25 30  
Leu Glu Ala Asp Val Glu Thr Leu Arg Ala Glu Val Lys Met Ala Glu  
35 40 45  
Glu Thr Val Lys Arg Val Thr Gly Leu Asn Pro Met Leu His Val Met  
50 55 60  
Ser Asp Met Ser Ser Val Gly Val Pro Pro Phe Asp Gly Ser Pro Ser  
65 70 75 80  
Asp Thr Ser Ala Asp Ala Ala Val Pro Val Arg Asp Asp Pro Lys His  
85 90 95  
Gln Phe Tyr Gln Thr Asn Ser Met  
100

<210> 2115  
<211> 71  
<212> PRT  
<213> Eucalyptus grandis

<400> 2115  
Met Gly Arg His Ser Cys Cys Tyr Lys Gln Lys Leu Arg Lys Gly Leu  
1 5 10 15  
Trp Ser Pro Glu Glu Asp Glu Lys Leu Leu Arg Tyr Ile Thr Gln Tyr  
20 25 30  
Gly His Gly Cys Trp Ser Ser Val Pro Lys Leu Ala Gly Leu Gln Arg  
35 40 45  
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
50 55 60  
Leu Lys Arg Gly Thr Phe Ser  
65 70

<210> 2116  
<211> 55  
<212> PRT  
<213> Eucalyptus grandis

<400> 2116  
Glu Leu Gln His Leu Glu Gln Gln Leu Ser Gly Ala Leu Ser Ser Val  
1 5 10 15  
Lys Glu Lys Lys Glu Gln Trp Leu Leu Glu Gln Leu Glu Arg Ser Arg  
20 25 30  
Leu Gln Glu Gln Arg Ala Met Leu Glu Asn Glu Thr Leu Arg Arg Gln  
35 40 45  
Val Asp Glu Leu Arg Gly Phe  
50 55

<210> 2117  
<211> 62  
<212> PRT  
<213> Eucalyptus grandis

&lt;400&gt; 2117

Glu	Ile	Ser	Val	Leu	Cys	Asp	Ala	Asp	Val	Ala	Leu	Ile	Val	Phe	Ser
1				5					10					15	
Thr	Lys	Gly	Lys	Leu	Phe	Glu	Tyr	Ala	Thr	Asp	Cys	Cys	Met	Glu	Arg
			20					25					30		
Ile	Leu	Glu	Arg	Tyr	Glu	Arg	Tyr	Ser	Tyr	Ala	Glu	Ser	Gln	Val	Leu
		35				40						45			
Thr	Asn	Asn	Ala	Glu	Thr	Asn	Gly	Asn	Trp	Thr	Leu	Glu	His		
	50					55					60				

&lt;210&gt; 2118

&lt;211&gt; 49

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2118

Leu	Phe	Pro	Pro	Gln	Ser	Glu	Gly	Phe	Phe	Asn	Pro	Met	Asp	Gly	Asn
1				5				10						15	
Leu	Ser	Leu	Gln	Ile	Gly	Tyr	Asn	Pro	Thr	Cys	Leu	Asp	Glu	Met	Asn
			20					25					30		
Ala	Ser	Val	Ser	Ser	Gln	Asn	Val	Ala	Gly	Phe	Ile	Pro	Gly	Trp	Met
		35				40						45			

Leu

&lt;210&gt; 12119

&lt;211&gt; 195

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2119

Ser	Gly	Ser	Gln	Val	Ser	Ile	Ile	Met	Ile	Ser	Ser	Thr	Gly	Lys	Leu
1				5				10						15	
His	Glu	Tyr	Ile	Ser	Pro	Ser	Thr	Ser	Thr	Lys	Lys	Met	Tyr	Asp	Gln
			20					25					30		
Tyr	Gln	Gln	Ala	Leu	Glu	Val	Asp	Leu	Trp	Ser	Ser	His	Tyr	Glu	Lys
		35				40						45			
Met	Gln	Glu	Asn	Leu	Arg	Lys	Leu	Lys	Glu	Val	Asn	Lys	Lys	Leu	Gln
	50					55					60				
Leu	Glu	Val	Arg	Arg	Arg	Phe	Gly	Glu	Gly	Leu	Asn	Gly	Met	Ser	Leu
65				70						75				80	
Ser	Glu	Leu	Cys	Gly	Leu	Glu	Gln	Asp	Met	Asp	Asn	Ala	Val	Ser	Leu
			85					90					95		
Ile	Arg	Glu	Arg	Lys	Tyr	Lys	Thr	Leu	Gly	Asn	Gln	Ile	Asp	Thr	Ala
			100					105					110		
Arg	Lys	Lys	Lys	Lys	Asn	Ala	Glu	Glu	Ile	Asn	Lys	Ser	Leu	Leu	Gln
		115					120					125			
Asp	Trp	Thr	Asn	Leu	Ile	Lys	His	Leu	Arg	Glu	Asp	Asp	Pro	His	Phe
	130					135					140				
Gly	Met	Val	Asp	Asn	Gly	Arg	Asp	Tyr	Glu	Ala	Val	Ile	Gly	Tyr	Thr
145				150						155				160	
Asp	Ala	Ala	Ala	Ala	Ala	Arg	Leu	Tyr	Thr	Leu	Arg	Leu	Gln	Pro	Asp
			165					170					175		
Gln	Pro	Asn	Leu	Thr	Ser	Gly	Gly	Gly	Ser	Glu	Ile	Thr	Thr	Tyr	Pro
			180				185						190		

Leu Leu Glu  
195

&lt;210&gt; 2120

&lt;211&gt; 92

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2120

```

Met Ala Phe Lys Ser Pro Gly Gly Ile Thr Trp Leu Lys His Leu Leu
 1           5           10           15
Val Lys Asn Phe Tyr Leu Gly Glu His Leu Lys Cys Arg Asn Gly Leu
           20           25           30
Ile Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ile Asp Ile Ala
           35           40           45
Leu Ile Met Phe Ser Pro Ser Asp Arg Val Ser His Phe Ser Gly Lys
           50           55           60
Arg Arg Ile Glu Asp Val Leu Thr Arg Phe Ile Asn Leu Thr Asp Gln
65           70           75           80
Glu Arg Thr Leu Leu Asp Val Gln Asp Arg Arg Thr
           85           90

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&lt;210&gt; 2121

&lt;211&gt; 41

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2121

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Met Gly Arg Gly Arg Val Gln Leu Lys Arg Ile Glu Asn Lys Ile Asn
 1           5           10           15
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
           20           25           30
Tyr Glu Leu Ser Leu Leu Cys Asp Ala
           35           40

```

&lt;210&gt; 2122

&lt;211&gt; 96

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2122

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Leu Gln Tyr Asp Trp His His Leu Ser Phe Cys Val Ile Ile Ser Val
 1           5           10           15
Leu Asn Leu Gln Asn Thr Ile Asn Gly Ser Cys Ser Met Glu Ser Ile
           20           25           30
Leu Glu Arg Tyr Glu Arg Tyr Thr Tyr Ala Glu Arg Gln Gln Val Ala
           35           40           45
Thr Asp Ser Pro Gln Val Gln Gly Ser Trp Ser Leu Glu Tyr Pro Lys
50           55           60
Leu Val Ala Arg Ile Glu Val Leu Gln Arg Asn Ile Arg Asn Leu Ser
65           70           75           80
Gly Glu Glu Leu Asp Pro Leu Ser Leu Arg Glu Leu Gln Tyr Leu Glu
           85           90           95

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&lt;210&gt; 2123

&lt;211&gt; 76

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2123

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Phe Leu Phe Arg Arg Lys Gln Gly Ala Val Glu Glu Leu Lys Met Val
 1           5           10           15
Gln Glu Val Arg Lys Gly Pro Trp Thr Glu Gln Glu Asp Phe Gln Leu
           20           25           30
Val Cys Phe Val Gly Leu Phe Gly Asp Arg Arg Trp Asp Phe Ile Ala
           35           40           45
Lys Val Ser Gly Leu Lys Val Ala Gly Glu Asn Asn Arg Tyr Val Arg

```

50 55 60  
Phe Lys Ala Trp Gly Phe Phe Gly Arg Ser Tyr Phe  
65 70 75

<210> 2124  
<211> 55  
<212> PRT  
<213> Eucalyptus grandis

<400> 2124  
Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
1 5 10 15  
Trp Thr Lys Glu Glu Asp Gln Arg Leu Ile Asp Tyr Ile Arg Leu His  
20 25 30  
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ser Ala Gly Leu Leu Arg  
35 40 45  
Cys Gly Lys Ser Cys Arg Leu  
50 55

<210> 2125  
<211> 123  
<212> PRT  
<213> Eucalyptus grandis

<400> 2125  
Val Glu Gln Val Gln Phe Leu Glu Lys Ser Phe Glu Val Glu Asn Lys  
1 5 10 15  
Leu Glu Pro Asp Arg Lys Ile Gln Leu Ala Lys Asp Leu Gly Leu Gln  
20 25 30  
Pro Arg Gln Val Ala Ile Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys  
35 40 45  
Thr Lys Gln Leu Glu Lys Asp Tyr Glu Thr Leu Gln Ala Ser Phe Asn  
50 55 60  
Thr Leu Lys Ser Asp Tyr Asp Thr Leu Ile Lys Glu Arg Asn Asp Leu  
65 70 75 80  
Lys Ala Glu Val Leu Asn Leu Thr Asp Lys Leu Leu His Lys Gly Asn  
85 90 95  
Glu Lys Glu Ser Ser Glu Ser Ser Ser Lys Ser Ser Gln Gly Leu Phe  
100 105 110  
Gln Asn Pro Ile Ala Asp Ser Val Ser Glu Asp  
115 120

<210> 2126  
<211> 105  
<212> PRT  
<213> Eucalyptus grandis

<400> 2126  
Met Ala Arg Phe Pro Arg Val Asp Lys Ser Asn Ser Lys Lys Thr Val  
1 5 10 15  
Lys Lys Gly Ala Trp Ser Ala Glu Glu Asp Gln Lys Leu Val Ala Tyr  
20 25 30  
Ile Lys Arg Tyr Gly Ile Trp Asn Trp Thr His Met Ala Glu Pro Ala  
35 40 45  
Gly Leu Ala Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr  
50 55 60  
Leu Arg Pro Asn Ile Lys His Gly Asn Ile Thr Gln Glu Glu Glu  
65 70 75 80  
Ile Ile Ile Asn Leu His Arg Val Leu Gly Asn Arg Trp Ala Ser Ile  
85 90 95  
Ala Ser Arg Leu Ser Gly Arg Thr Asp

100

105

<210> 2127  
 <211> 115  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2127  
 Met Ala Arg Glu Lys Ile Lys Lys Ile Asp Asn Val Thr Ala  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Arg Gly Leu Phe Lys Lys Ala  
 20 25 30  
 Gly Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Val Val Ile Phe  
 35 40 45  
 Ser Ala Thr Gly Lys Leu Phe Glu Tyr Ser Ser Ser Ser Met Lys Asp  
 50 55 60  
 Thr Leu Glu Arg Tyr Thr Leu His His Asn Asn Leu Glu Asn Met Asp  
 65 70 75 80  
 Gln Pro Ser Leu Glu Leu Gln Leu Glu His Ser Asn Asn Met Arg Leu  
 85 90 95  
 Ser Lys Glu Val Ala Glu Lys Ser His Arg Leu Arg Gln Leu Arg Gly  
 100 105 110  
 Glu Asp Leu  
 115

<210> 2128  
 <211> 155  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2128  
 Met Gly Arg Lys Cys Ser Arg Cys Gly Asn Ile Gly His Asn Ser Arg  
 1 5 10 15  
 Thr Cys Thr Thr Phe Met Gly Ala Ala Ser Ala Cys Gly Leu Lys Leu  
 20 25 30  
 Phe Gly Val Gln Leu Asp Leu Ser Ser Ser Ser Pro Pro Ser Ser Ser  
 35 40 45  
 Ala Ser Ser Gly Ser Ala His Pro Tyr Ser Leu Val Ile Lys Lys Ser  
 50 55 60  
 Leu Ser Met Asp Arg Leu Ser Ser Ser Ser Ala Ser Ser Ser Ser Pro  
 65 70 75 80  
 Ser Ser Ser Leu Ser Ser Pro Arg Val Leu Ala Asp Glu His Cys Asn  
 85 90 95  
 Lys Thr Ser Leu Gly Tyr Leu Ser Asp Gly Leu Ala Ala Arg Ser Gln  
 100 105 110  
 Glu Lys Arg Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Thr Phe  
 115 120 125  
 Leu Met Gly Leu Glu Lys Met Gly Lys Gly Asp Trp Arg Gly Ile Ser  
 130 135 140  
 Arg Asn Tyr Val Thr Thr Arg Thr Pro Thr Gln  
 145 150 155

<210> 2129  
 <211> 145  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2129  
 Arg Gly Trp Arg Gln Ile Glu Glu His Val Gly Thr Lys Thr Ala Val  
 1 5 10 15  
 Gln Ile Arg Ser His Ala Gln Lys Phe Phe Ser Lys Val Ala Arg Gly

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      20      25      30
Val Ser Gly Ser Ser Glu Gly Val Ile Lys Pro Ile Glu Ile Pro Pro
      35      40      45
Pro Arg Pro Lys Arg Lys Pro Met His Pro Tyr Pro Arg Lys Ser Val
      50      55      60
Asp Ser Lys Glu Val Lys Leu Ser Tyr Gln Gln Glu Arg Ser Pro Ser
      65      70      75      80
Pro Ile Ser Ser Val Ala Asp Glu Asn Thr Gly Ser Pro Thr Ser Val
      85      90      95
Leu Ser Ala His Gly Ser Asp Met Leu Gly Ser Ala Ser Leu His Gln
      100      105      110
Gln Asn Arg Cys Ser Ser Pro Thr Ser Cys Thr Thr Asp Val Pro Ser
      115      120      125
Ile Gly Leu Ala Val Ile Glu Lys Gln Pro Glu Ile Phe Lys Glu Glu
      130      135      140
Asp
145

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<210> 2130
<211> 156
<212> PRT
<213> Eucalyptus grandis

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      <400> 2130
Phe Gly His Glu Phe Thr Ser Ser Pro Ala Ser Ser Ser Ser Leu Ser
  1      5      10      15
Ser Ser Arg Ile Ser Ile Gly Glu Asn Ser Asp Lys Ala Ser Leu Gly
      20      25      30
Tyr Leu Ser Asp Gly Leu Leu Gly Arg Ser Gln Glu Lys Lys Lys Gly
      35      40      45
Val Pro Trp Thr Glu Glu Glu His Arg Thr Phe Leu Val Gly Leu Glu
      50      55      60
Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Ser Tyr Val Thr
      65      70      75      80
Thr Arg Thr Pro Ala Gln Val Ala Ser His Ala Gln Lys Tyr Phe Leu
      85      90      95
Arg Gln Val Ser Phe Asn Lys Lys Lys Arg Arg Ser Ser Leu Phe Asp
      100      105      110
Met Val Asp Val Lys Thr Ala Ala Gly Asp Arg Leu Gly Ser Leu Thr
      115      120      125
Ala Lys Pro Ser Glu Ser Val Pro Asn Cys Lys Met Gly Thr Leu Met
      130      135      140
Ser His Leu Gln Val His Asp Ala Arg Thr Thr Gln
145      150      155

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<210> 2131
<211> 49
<212> PRT
<213> Eucalyptus grandis

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      <400> 2131
Met Val Gln Glu Val Arg Lys Gly Pro Trp Thr Glu Gln Glu Asp Phe
  1      5      10      15
Gln Leu Val Cys Phe Val Gly Leu Phe Gly Asp Arg Arg Trp Asp Phe
      20      25      30
Ile Ala Lys Val Ser Gly Leu Lys Val Ala Gly Glu Asn Asn Arg Ile
      35      40      45
Glu

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<210> 2132

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<211> 151  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2132  
 Asp Asp Val Cys Gly Gly Gly Lys Arg Pro Glu Arg Pro Phe Phe Cys  
 1 5 10 15  
 Thr Tyr Asp Gly Glu Glu Asn Gly Asp Asp Asp Tyr Asp Glu Tyr Leu  
 20 25 30  
 His Gln Pro Glu Lys Lys Arg Arg Leu Ser Ile Glu Gln Val Leu Tyr  
 35 40 45  
 Leu Glu Lys Ser Phe Glu Thr Asp Asn Lys Leu Glu Pro Asp Lys Lys  
 50 55 60  
 Val Gln Leu Ala Lys Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Ile  
 65 70 75 80  
 Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Met Glu Lys  
 85 90 95  
 Asp Phe Asp Lys Leu Gln Ala Ser Phe Asn Cys Leu Lys Ser Asp Tyr  
 100 105 110  
 Glu Ser Leu Leu Asn Glu Lys Glu Lys Leu Lys Ala Glu Val Ile His  
 115 120 125  
 Leu Thr His Gln Leu Glu Gln Arg Ser Asn Gly Ile Leu Asn His Ser  
 130 135 140  
 Thr Tyr Leu Asn Asn Cys Thr  
 145 150

<210> 2133  
 <211> 133  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2133  
 Met Gly Ser Arg Thr Arg Val Gly Gly Gly Gly Asp Asp Gly Arg Val  
 1 5 10 15  
 Val Asn Gly Met Pro Ser Phe Val Pro Gln Leu Pro Thr Ser Asn Ser  
 20 25 30  
 Met Gly Ser Glu Gly Asn Ser Ile Arg Ser Ser Arg Ile Thr Asp Phe  
 35 40 45  
 Gly Thr Leu Glu Gln Ser Leu Gly Tyr Arg Ile Glu Asp Ala Val Asp  
 50 55 60  
 Leu Ser Arg Asn Pro Val Phe Asn Gln Met Lys Ser Ser Ala Gln Ala  
 65 70 75 80  
 Leu Gly Ala Asp Val Gln Phe Gly Ser Leu Asn Lys Ser Leu Ser Ser  
 85 90 95  
 Ser Asp Arg Asn Leu Ser Val Asn Ile Val Gly Ser Gln Thr Leu Ser  
 100 105 110  
 Met His Arg Glu Ser Gln Ser Asn Leu Val Ser Ile Pro Gly Ala His  
 115 120 125  
 Arg Glu Asn Trp Gly  
 130

<210> 2134  
 <211> 150  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2134  
 Met Pro Pro Pro Arg Ala Ala Thr Pro Asp Val Ala Gly Asp Glu Ser  
 1 5 10 15  
 Ser Gly Ala Asp Ala Gly Ala Gly Glu Ile Met Leu Phe Gly Val Arg  
 20 25 30

Val Val Val Asp Ser Met Arg Lys Cys Val Ser Leu Asn Asn Leu Ser  
           35                          40                          45  
 Gln Tyr Gln His Pro Gln Asp Ala Asn Pro Pro Asn Ala Ser Gly Gly  
           50                          55                          60  
 Ser Gly Gly Asn Lys Glu Glu Ala Ala Lys Gly Tyr Ala Ser Ala Asp  
 65                          70                          75                          80  
 Asp Ala Ala His Asn Pro Gly Gly Gly Arg Glu Arg Lys Arg Gly Val  
                           85                          90                          95  
 Pro Trp Thr Glu Glu Glu His Arg Leu Phe Leu Leu Gly Leu Gln Lys  
                           100                          105                          110  
 Val Gly Lys Gly Asp Trp Arg Ala Ile Ser Arg Asn Phe Val Lys Thr  
                           115                          120                          125  
 Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Phe Leu Arg  
                           130                          135                          140  
 Arg Ser Asn Leu Asn Arg  
 145                          150

<210> 2135  
 <211> 125  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2135  
 Glu Asn Val Ala Ser Gly Ser Thr Glu Arg Pro Arg Ile Arg His Gln  
 1                          5                          10                          15  
 His Ser Gln Ser Met Asp Gly Ser Thr Ser Ile Lys Pro Glu Met Leu  
                           20                          25                          30  
 Met Ser Gly Ser Glu Asp Ala Ser Ala Ala Asp Ala Lys Lys Ala Met  
                           35                          40                          45  
 Ser Ala Ala Lys Leu Ala Glu Leu Ala Leu Ile Asp Pro Lys Arg Ala  
                           50                          55                          60  
 Lys Arg Ile Trp Ala Asn Arg Gln Ser Ala Ala Arg Ser Lys Glu Arg  
 65                          70                          75                          80  
 Lys Met Arg Tyr Ile Ala Glu Leu Glu Arg Lys Val Gln Thr Leu Gln  
                           85                          90                          95  
 Thr Glu Ala Thr Thr Leu Ser Ala Gln Leu Thr Leu Leu Gln Arg Asp  
                           100                          105                          110  
 Thr Asn Gly Leu Thr Ala Glu Asn Ser Glu Leu Lys Leu  
                           115                          120                          125

<210> 2136  
 <211> 72  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2136  
 Met Ala Asp Ser Glu His Ser Ser Ser Asp Asp Thr Tyr Val Asp Ser  
 1                          5                          10                          15  
 Arg Glu Glu Thr Ser Glu Glu Ser Lys Leu Asp Phe Ser Glu Asp Glu  
                           20                          25                          30  
 Glu Thr Leu Val Ile Arg Met Tyr Asn Leu Val Gly Glu Arg Trp Ser  
                           35                          40                          45  
 Leu Ile Ala Gly Arg Ile Pro Gly Arg Thr Ala Glu Glu Ile Glu Lys  
                           50                          55                          60  
 Tyr Trp Asn Ser Arg Tyr Ser Thr  
 65                          70

<210> 2137  
 <211> 135  
 <212> PRT  
 <213> Eucalyptus grandis

&lt;400&gt; 2137

```

Met Ala Gly Glu Glu Pro Tyr Ser Ala Asp Thr Asn Ser Asp Thr Phe
 1           5           10           15
Ala Asp Glu Glu Thr Leu Ile Pro Ser Ser Ser Glu Ala Leu Glu Ser
          20           25           30
Ala Trp Val Pro Thr Ser Ser Thr Ala His His Gly Ser Lys Ser Val
          35           40           45
Val Asn Phe Glu Asp Val Cys Gly Gly Gly Asp Thr Asn Thr Ala Pro
          50           55           60
Arg Pro Tyr Leu Arg Gln Ile Asp Leu Lys Glu Glu Ala Val Glu Glu
65           70           75           80
Asp Tyr Gly Asp Gly Asn Phe Gln Pro Pro Gly Lys Lys Arg Arg Leu
          85           90           95
Ser Ala Asp Gln Val His Phe Leu Glu Arg His Phe Glu Val Glu Asn
          100          105          110
Lys Leu Glu Pro Glu Arg Lys Ile Gln Leu Ala Lys Asp Leu Gly Leu
          115          120          125
Gln Pro Arg Gln Val Ala Ile
130           135

```

&lt;210&gt; 2138

&lt;211&gt; 123

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2138

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Asp Thr Glu Asp Ser Lys Lys Lys Glu Arg His Ile Val Thr Trp Ser
 1           5           10           15
Gln Glu Glu Asp Asp Ile Leu Arg Glu Gln Ile Gly Ile His Gly Thr
          20           25           30
Glu Asn Trp Ser Ile Ile Ala Ser Lys Phe Lys Asp Lys Thr Thr Arg
          35           40           45
Gln Cys Arg Arg Arg Trp Tyr Thr Tyr Leu Asn Ser Asp Phe Lys Lys
          50           55           60
Gly Gly Trp Ser Pro Glu Glu Asp Val Leu Leu Cys Glu Ala Gln Lys
65           70           75           80
Ile Phe Gly Asn Arg Trp Thr Glu Ile Ala Lys Val Val Ser Gly Arg
          85           90           95
Thr Asp Asn Ala Val Lys Asn Arg Phe Thr Thr Leu Cys Lys Lys Arg
          100          105          110
Ala Arg Tyr Glu Ala Leu Ala Lys Glu Asn Thr
          115          120

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&lt;210&gt; 2139

&lt;211&gt; 126

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2139

```

Met Gly Arg Gln Pro Cys Cys Asp Lys Leu Gly Val Lys Lys Gly Pro
 1           5           10           15
Trp Thr Ala Glu Glu Asp Arg Lys Leu Val Asn Phe Ile Leu Thr His
          20           25           30
Gly Gln Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Arg Arg
          35           40           45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp
          50           55           60
Leu Lys Arg Gly Leu Leu Asn Glu Ala Glu Glu Ser Leu Val Ile Asp
65           70           75           80
Leu His Ala Thr Leu Gly Asn Arg Trp Ser Lys Ile Ala Ala Arg Leu

```

				85						90				95					
Pro	Gly	Arg	Thr	Asp	Asn	Glu	Ile	Lys	Asn	His	Trp	Asn	Thr	His	Ile				
				100				105						110					
Lys	Lys	Lys	Leu	Ile	Arg	Met	Gly	Ile	Asp	Pro	Val	Thr	His						
			115				120						125						

<210> 2140  
 <211> 108  
 <212> PRT  
 <213> Eucalyptus grandis

Pro	Gly	Ser	Arg	Ser	Ser	Asn	Arg	Arg	Val	Glu	Arg	Lys	Lys	Gly	Asn				
1				5					10					15					
Pro	Trp	Thr	Glu	Glu	Glu	His	Arg	Arg	Phe	Leu	Ile	Gly	Leu	Gln	Lys				
			20					25					30						
Leu	Gly	Lys	Gly	Asp	Trp	Arg	Gly	Ile	Ala	Arg	Asp	Phe	Val	Thr	Thr				
		35					40					45							
Arg	Thr	Pro	Thr	Gln	Val	Ala	Ser	His	Ala	Gln	Lys	Tyr	Tyr	Ile	Arg				
		50				55					60								
Gln	Ser	Asn	Ala	Gly	Arg	Arg	Lys	Arg	Arg	Ser	Ser	Leu	Phe	Asp	Met				
65				70						75				80					
Ala	Pro	Asp	Met	Val	Cys	Leu	Leu	Tyr	Asp	Val	Ala	Ser	Ala	His	Ser				
			85						90					95					
Leu	His	Ser	Val	Gln	Ile	Ser	Gly	Ser	Cys	Met	Phe								
			100					105											

<210> 2141  
 <211> 109  
 <212> PRT  
 <213> Eucalyptus grandis

Met	Arg	Lys	Pro	Cys	Cys	Asp	Lys	Gln	Asp	Thr	Asn	Lys	Gly	Ala	Trp				
1				5					10					15					
Ser	Lys	Gln	Glu	Asp	Gln	Lys	Leu	Ile	Asp	Tyr	Ile	Arg	Lys	His	Gly				
			20					25					30						
Glu	Gly	Cys	Trp	Arg	Thr	Leu	Pro	Lys	Ala	Ala	Gly	Leu	Leu	Arg	Cys				
		35					40					45							
Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Ile	Asn	Tyr	Leu	Arg	Pro	Asp	Leu				
		50				55					60								
Lys	Arg	Gly	Asn	Phe	Ala	Glu	Asp	Glu	Glu	Asp	Leu	Ile	Ile	Lys	Leu				
65				70						75				80					
His	Ala	Leu	Leu	Gly	Asn	Arg	Trp	Ser	Leu	Ile	Ala	Gly	Arg	Leu	Pro				
			85						90					95					
Gly	Arg	Thr	Asp	Asn	Glu	Val	Lys	Asn	Tyr	Trp	Asn	Ser							
			100					105											

<210> 2142  
 <211> 65  
 <212> PRT  
 <213> Eucalyptus grandis

Ser	Pro	Glu	Glu	Asp	Glu	Lys	Leu	Phe	Asn	Tyr	Ile	Thr	Arg	Phe	Gly				
1				5					10					15					
Val	Gly	Cys	Trp	Ser	Ser	Val	Pro	Lys	Leu	Ala	Gly	Leu	Gln	Arg	Cys				
			20					25					30						
Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Ile	Asn	Tyr	Leu	Arg	Pro	Asp	Leu				
		35					40					45							
Lys	Arg	Gly	Met	Phe	Ser	Gln	Glu	Glu	Glu	Asp	Leu	Ile	Val	Ser	Leu				

50                      55                      60

His  
65

<210> 2143  
<211> 121  
<212> PRT  
<213> Pinus radiata

<400> 2143

Ala	Lys	Ser	Tyr	Leu	Gly	Ser	Leu	Thr	Glu	Thr	Ile	Gln	Ser	Leu	Asn
1				5					10					15	
Ala	Glu	Leu	Glu	Arg	Thr	Arg	Ser	Glu	Leu	Val	Glu	Ala	Lys	Lys	Arg
			20					25					30		
Glu	Glu	Glu	Ile	Ile	Ser	Lys	Glu	Ala	Glu	Arg	Val	Glu	Lys	Asn	Lys
		35					40					45			
Arg	Glu	Val	Glu	Asn	Leu	Glu	Leu	Asn	Leu	Leu	Gln	Thr	Thr	Ala	Glu
	50					55					60				
Ala	Gly	Arg	Ala	Lys	Leu	Glu	Leu	Glu	Thr	Ala	Tyr	Glu	Glu	Val	Gln
65					70					75					80
Ser	Ala	Arg	Leu	Glu	Thr	Ala	Gln	Leu	Arg	Ala	Ala	Leu	Glu	Ala	Thr
			85						90				95		
Glu	Gly	Lys	Phe	Glu	Ala	Met	Leu	Ser	Glu	Thr	Arg	Leu	Glu	Ala	Glu
			100					105					110		
His	Val	Lys	Gly	Ala	Ile	Glu	Lys	Tyr							
		115					120								

<210> 2144  
<211> 71  
<212> PRT  
<213> Pinus radiata

<400> 2144

Glu	Ile	Leu	Val	Thr	Gln	Ile	Glu	Gln	Leu	Gln	Arg	Lys	Glu	Arg	Met
1				5					10					15	
Phe	Ser	Glu	Glu	Asn	Asn	Phe	Leu	Arg	Lys	Arg	Ile	Val	Asp	Pro	His
			20					25					30		
Ser	Val	Leu	Thr	Thr	Pro	Ala	Ser	Gly	Ser	Gly	Ser	Leu	Gln	Arg	Ser
		35					40					45			
Glu	Val	Glu	Thr	Gln	Leu	Val	Met	Arg	Pro	Pro	Ser	Ser	Asn	Ala	Asp
	50					55					60				
Phe	Leu	Phe	Asn	Ser	Ser	His									
65					70										

<210> 2145  
<211> 110  
<212> PRT  
<213> Pinus radiata

<400> 2145

Ser	Leu	Val	Trp	Gly	Ala	Leu	Lys	Met	Gly	Lys	Thr	Lys	Met	Glu	Ile
1				5					10					15	
Lys	Arg	Ile	Gln	Asn	Pro	Ser	Arg	Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg
			20					25					30		
Lys	Asn	Gly	Leu	Leu	Lys	Lys	Ala	Phe	Glu	Leu	Ser	Val	Leu	Cys	Asp
		35					40					45			
Ala	Glu	Val	Ala	Leu	Ile	Ile	Phe	Ser	Glu	Thr	Gly	Lys	Ile	Cys	Glu
	50					55					60				
Phe	Ala	Ser	His	Asp	Asp	Met	Ala	Thr	Ile	Leu	Glu	Lys	Tyr	Arg	Ile
65				70						75					80
Tyr	Thr	Glu	Thr	His	Gly	Asn	Met	Glu	Ser	Ser	Ser	Val	Gln	Ser	Val

85 90 95  
 Lys Ile Gly Glu Ser Gln Leu Lys Ala Leu Arg Glu Lys Met  
 100 105 110

<210> 2146  
 <211> 50  
 <212> PRT  
 <213> Pinus radiata

<400> 2146  
 Leu Arg Gly Ala Asn Gly Cys Thr Ile Pro Ser Ile Gly Leu Thr Ser  
 1 5 10 15  
 Ile Glu Arg Val Glu Val Gln Thr Gln Leu Val Met Arg Pro Pro His  
 20 25 30  
 Ala Thr Glu Met Asp Asp Asn Phe Met Asp Val Asp Asn Val Pro Leu  
 35 40 45  
 Ser Gly  
 50

<210> 2147  
 <211> 168  
 <212> PRT  
 <213> Pinus radiata

<400> 2147  
 Glu Asp Gly Ser Leu Val Ile Cys Glu Arg Ser Leu Ser Ala Ala Gln  
 1 5 10 15  
 Gly Met Pro Met Val Ser Gln Ser Gln Ser Phe Val His Gly Glu Leu  
 20 25 30  
 Leu Ser Ser Gly Tyr Leu Ile Arg Pro Cys Glu Gly Arg Gly Ala Leu  
 35 40 45  
 Val Ile Met Val Asp His Arg Asn Leu Glu Ala Ser Ser Val Pro Glu  
 50 55 60  
 Ala Leu Arg Pro Leu Tyr Glu Ser Ser Thr Phe Phe Ala Gln Lys Met  
 65 70 75 80  
 Thr Val Glu Ala Ser Tyr His Leu Gln Gly Lys Val Gln Pro Glu Met  
 85 90 95  
 Ile Ser Leu Ser Lys Lys Leu Gln Gln Pro Cys Asn Val Arg Ser Tyr  
 100 105 110  
 Ser Gln Arg Leu Cys Arg Gly Phe Asn Glu Ala Val Asn Thr Leu Pro  
 115 120 125  
 Asp Asp Gly Trp Met Ser Leu Ser Lys Asp Gly Leu Gly Asp Val Thr  
 130 135 140  
 Ile Cys Glu Ser Phe Val Lys Leu Pro Glu Pro Asn Ala Ser Gln Ile  
 145 150 155 160  
 Ala Tyr Val Asn Ser Met Gly Thr  
 165

<210> 2148  
 <211> 120  
 <212> PRT  
 <213> Pinus radiata

<400> 2148  
 Glu Asn Glu Ser Leu Arg Ala Arg Leu Arg His Met Asn Gly Asp Asp  
 1 5 10 15  
 Ile Asn Ser Leu Lys Leu Pro Glu Leu Phe His Leu Glu Gln Gln Leu  
 20 25 30  
 Glu Thr Ala Ala Thr Gln Val Arg Arg Arg Lys Asp Gln Val Leu Asp  
 35 40 45  
 Asn Glu Lys Ile Lys Arg Arg Asn Lys Met Arg Arg Lys Glu Asp Glu

50 55 60  
 Asn Ile Ile Leu His Glu Met Leu Asp Gln His His Gly Gln Met Glu  
 65 70 75 80  
 Glu Asp Asn Ala Gln Ile Asn Phe Leu Phe Cys Gln Pro Leu Asn Arg  
 85 90 95  
 Ser Asp Thr Thr Phe Pro Ala Ser Leu Leu Arg Leu Gln Pro Asn Gln  
 100 105 110  
 Pro Asn Leu Gln Asp Ile Gly Tyr  
 115 120

<210> 2149  
 <211> 165  
 <212> PRT  
 <213> Pinus radiata

<400> 2149  
 Ser Pro Gln Val Glu His Arg Pro Phe Ser Pro His Glu Asp Ala Thr  
 1 5 10 15  
 Ile Ile Gln Ala His Ala Arg His Gly Asn Lys Trp Ala Thr Ile Ala  
 20 25 30  
 Arg Leu Leu Pro Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn  
 35 40 45  
 Ser Thr Leu Arg Arg Arg Tyr His Gly Glu Lys Asp Gln Ser Asn Gly  
 50 55 60  
 Leu Ala Val Asn Leu Glu Ser Ala Ala Glu Asp Lys Glu Thr Met Thr  
 65 70 75 80  
 Pro Met Thr Pro Val Thr Ala Thr Ala Thr Ala Thr Ala Met  
 85 90 95  
 Pro Val Ala Leu Val Phe Pro Thr Ala Ala Asp Asn Val Arg Lys Arg  
 100 105 110  
 Ser Asn Ser Ser Cys Ser Ala Asn Asp Asn Pro Gly Asp Ala Glu Val  
 115 120 125  
 Glu Ser Cys Arg Leu Lys Arg Leu Asn Phe Ser Glu Ser Pro Ser Ser  
 130 135 140  
 Ser Glu Asn Ile Asn Asn Asn Asn Asn Glu Glu Ala Val Ser Gly  
 145 150 155 160  
 His Cys Asn Ser Ala  
 165

<210> 2150  
 <211> 68  
 <212> PRT  
 <213> Pinus radiata

<400> 2150  
 Met Gly Arg Gly Pro Val Gln Leu Arg Arg Ile Glu Asn Lys Ile Asn  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Ile Lys Lys Ala  
 20 25 30  
 Ser Glu Leu Ser Ile Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe  
 35 40 45  
 Ser Asn Lys Gly Lys Leu Tyr Glu Phe Ser Ser Ser Ser Met Thr Lys  
 50 55 60  
 Ile Leu Glu Arg  
 65

<210> 2151  
 <211> 152  
 <212> PRT  
 <213> Pinus radiata

&lt;400&gt; 2151

Gln	Ala	Gly	Leu	Gln	Arg	Cys	Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Ile
1				5					10					15	
Asn	Tyr	Leu	Arg	Pro	Asp	Leu	Lys	Arg	Gly	Thr	Phe	Ser	Pro	Gln	Glu
			20					25					30		
Glu	Asn	Leu	Ile	Val	Glu	Leu	His	Ser	Val	Leu	Gly	Asn	Arg	Trp	Ser
		35					40					45			
Gln	Ile	Ala	Thr	His	Leu	Pro	Gly	Arg	Thr	Asp	Asn	Glu	Ile	Lys	Asn
	50					55					60				
Leu	Trp	Asn	Ser	Cys	Ile	Lys	Lys	Lys	Leu	Arg	Gln	Arg	Gly	Ile	Asp
65					70				75					80	
Pro	Asn	Thr	His	Arg	Pro	Leu	Ser	Glu	Val	Asn	Ala	Glu	Ala	Gly	Asp
				85				90						95	
Ser	Lys	Asn	Asp	Asn	Ser	Asn	Lys	Glu	Val	Glu	Thr	Gln	Ala	Ala	Met
			100					105					110		
Asp	Glu	Ser	His	Val	Ser	Ala	Gly	Asn	Glu	Phe	Lys	His	Leu	Asn	Ala
		115					120						125		
Ile	Pro	Arg	Ala	Asp	Thr	Ala	Asn	Pro	Lys	Phe	Phe	His	Val	Pro	Val
	130					135						140			
Glu	Asp	Asn	Thr	Leu	Ile	Ala	Ser								
145						150									

&lt;210&gt; 2152

&lt;211&gt; 89

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2152

Met	Arg	Cys	Thr	Arg	Trp	Gln	Gly	Leu	Pro	Phe	Ser	Ser	Lys	Pro	Lys
1				5					10					15	
Val	Lys	Lys	Gly	Leu	Trp	Ser	Pro	Glu	Glu	Asp	Glu	Lys	Leu	Ile	Asn
			20					25					30		
Tyr	Met	Met	Lys	Asn	Gly	Leu	Leu	Gly	Cys	Ser	Trp	Ser	Tyr	Val	Ala
		35					40					45			
Lys	Gln	Ile	Gly	Leu	Gln	Arg	Cys	Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp
	50					55				60					
Thr	Asn	Tyr	Leu	Arg	Pro	Gly	Leu	Lys	Arg	Gly	Ala	Ile	Ser	Pro	Glu
65					70					75				80	
Glu	Glu	Gln	Leu	Ile	Ile	His	Leu	Gln							
						85									

&lt;210&gt; 2153

&lt;211&gt; 94

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2153

Met	Gly	Arg	Ala	Pro	Cys	Cys	Asp	Lys	Ala	Asn	Val	Lys	Lys	Gly	Pro
1				5					10					15	
Trp	Ser	Pro	Glu	Glu	Asp	Thr	Lys	Leu	Lys	Ala	Phe	Ile	Glu	Gln	His
			20					25					30		
Gly	Thr	Gly	Gly	Asn	Trp	Ile	Ala	Leu	Pro	Gln	Lys	Ala	Gly	Leu	Lys
		35					40					45			
Arg	Cys	Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Leu	Asn	Tyr	Leu	Arg	Pro
	50					55				60					
Asp	Ile	Arg	His	Gly	Gly	Phe	Ser	Glu	Asp	Glu	Asp	Asn	Ile	Ile	Cys
65					70					75				80	
Ser	Leu	Tyr	Ala	Ser	Ile	Gly	Ser	Met	Val	Ser	Ile	Ile	Ala		
				85				90							

&lt;210&gt; 2154



<211> 217  
 <212> PRT  
 <213> Pinus radiata

<400> 2154  
 Met Val Arg Gly Lys Thr Gln Met Lys Arg Ile Glu Asn Asp Thr Ser  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
 20 25 30  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Ile Ile Phe  
 35 40 45  
 Ser Pro Arg Gly Lys Leu Tyr Glu Phe Ala Ser Pro Ser Met Glu Glu  
 50 55 60  
 Ile Leu Glu Lys Tyr Lys Lys Arg Ser Lys Glu Asn Gly Met Ala Gln  
 65 70 75 80  
 Thr Thr Lys Glu Gln Asp Thr Gln Tyr Ser Lys His Ser Lys Gln Lys  
 85 90 95  
 Leu Ala Asn Met Glu Glu Gln Ile Arg Ile Leu Glu Ser Thr Gln Arg  
 100 105 110  
 Lys Met Leu Gly Glu Gly Leu Glu Ser Cys Ser Met Ala Glu Leu Asn  
 115 120 125  
 Lys Leu Glu Ser Gln Ala Glu Arg Gly Leu Ser His Ile Arg Ala Arg  
 130 135 140  
 Lys Thr Glu Ile Leu Val Asp Gln Ile Glu Cys Leu Lys Arg Lys Glu  
 145 150 155 160  
 Arg Leu Leu Ser Glu Glu Asn Ala Leu Leu Ser Arg Lys Trp Val Asp  
 165 170 175  
 Arg Gln Ser Val Asp Gly Ser Gly Ser Thr Ser Ser Ser Ile Gly Leu  
 180 185 190  
 Gly Ser Ile Glu Gln Ile Glu Val Glu Thr Gln Leu Val Ile Arg Pro  
 195 200 205  
 Pro Asn Ala Gln Asp His Cys Ser Val  
 210 215

<210> 2155  
 <211> 113  
 <212> PRT  
 <213> Pinus radiata

<400> 2155  
 Leu Gly Trp Gly Arg Gln Pro Ala Ala Leu Arg Thr Phe Ser Gln Arg  
 1 5 10 15  
 Leu Cys Lys Gly Phe Asn Glu Ala Val Asn Gly Phe Thr Asp Asp Gly  
 20 25 30  
 Trp Ser Leu Met Gly Asn Asp Gly Met Glu Asp Val Thr Ile Leu Val  
 35 40 45  
 Asn Ser Ser Pro Ser Lys Leu Phe Gly Gln Gln Phe Ala Ser Ser Asp  
 50 55 60  
 Gly Leu Pro Ala Leu Gly Gly Gly Ile Leu Cys Ala Lys Ala Ser Met  
 65 70 75 80  
 Leu Leu Gln Asn Val Pro Pro Ala Leu Leu Val Arg Phe Leu Arg Glu  
 85 90 95  
 His Arg Ser Glu Trp Ala Asp Ser Asn Ile Asp Ala Tyr Ser Ala Ala  
 100 105 110  
 Ser

<210> 2156  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

&lt;400&gt; 2156

```

Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1           5           10           15
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
           20           25           30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
           35           40           45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
           50           55           60
Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Ile Ile Lys
65           70           75           80
Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
           85           90           95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr
           100           105

```

&lt;210&gt; 2157

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2157

```

Leu Trp Leu Arg Phe Ser Gly Met Asp Arg Ser Asn Ser Ala Thr Gly
 1           5           10           15
Glu Glu Asp Val Leu Ser Arg Cys Arg Glu Arg Lys Arg Phe Met Lys
           20           25           30
Leu Ala Ile Glu Asn Arg Tyr Lys Leu Ala Thr Ala His Val Ala Tyr
           35           40           45
Met Asp Ser Leu Arg Arg Met Gly Thr Gly Leu Arg Leu Phe Ala Glu
           50           55           60
Gly Glu Thr Met Ser Glu Ser Ser Tyr Ser Thr Ser Pro Ile Gly Thr
65           70           75           80
Ser Glu Leu Ala Val Val Leu Pro Glu Lys Ser Val Ser Pro Ser Pro
           85           90           95
Phe Pro Ser Ser Ser Pro Ser Leu Ser Gln Pro Gln Ser Pro Arg Ser
           100           105           110
Glu Arg Ala Glu Ser Arg Ser Pro Leu Asp Ser Phe
           115           120

```

&lt;210&gt; 2158

&lt;211&gt; 110

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2158

```

Asp Gly Leu Val Gln Asn Ser Arg Glu Arg Lys Lys Gly Val Pro Trp
 1           5           10           15
Thr Glu Glu Glu His Lys Met Phe Leu Leu Gly Leu His Lys Leu Gly
           20           25           30
Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn Phe Val Thr Ser Arg Thr
           35           40           45
Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Phe Leu Arg Gln Ser
           50           55           60
Asn Leu Asn Lys Arg Lys Arg Arg Ser Ser Leu Phe Asp Ile Ser Thr
65           70           75           80
Asp Ser Met Glu Asp Cys Tyr Gln Gly Ile Pro Glu Leu Ser Pro Val
           85           90           95
Met His Asp Leu Ser Leu Gly Gln Asn Ser Ser Leu Thr Ser
           100           105           110

```

<210> 2159  
 <211> 175  
 <212> PRT  
 <213> Pinus radiata

<400> 2159  
 Ser Ser Pro Val Ser Lys Pro Lys Leu Arg Lys Gly Leu Trp Ser Pro  
 1 5 10 15  
 Glu Glu Asp Asp Lys Leu Ile Asn Tyr Met Met Lys Asn Gly Gln Gly  
 20 25 30  
 Cys Trp Ser Asp Val Ala Lys Gln Ala Gly Leu Gln Arg Cys Gly Lys  
 35 40 45  
 Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu Lys Arg  
 50 55 60  
 Gly Ala Phe Ser Pro Gln Glu Glu Gln Leu Ile Ile His Leu His Ser  
 65 70 75 80  
 Ile Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala Arg Leu Pro Gly Arg  
 85 90 95  
 Thr Asp Asn Glu Ile Lys Asn Phe Trp Asn Ser Cys Ile Lys Lys Lys  
 100 105 110  
 Leu Lys His Leu Ser Ala Ser Thr Asn Asn Ser Lys Ser Ile Ser Ala  
 115 120 125  
 Pro Asn Arg Thr Ser Thr Met Asn Ser Ser Ile Thr Pro Phe Ser Glu  
 130 135 140  
 Ser Ser Ala Glu Pro Leu Glu Val Met Ala Thr Arg Tyr Gln Pro Ser  
 145 150 155 160  
 Asn Ala Phe Asn His Glu Val Pro Thr Ala Glu Asn Gln Val Leu  
 165 170 175

<210> 2160  
 <211> 78  
 <212> PRT  
 <213> Pinus radiata

<400> 2160  
 Met Gly Arg Ala Pro Cys Cys Glu Lys Val Gly Leu Lys Lys Gly Pro  
 1 5 10 15  
 Trp Thr Pro Glu Glu Asp Gln Lys Leu Leu Ala Tyr Ile Gln Glu His  
 20 25 30  
 Gly His Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp  
 50 55 60  
 Ile Lys Arg Gly Lys Phe Asn Pro Gln Glu Glu Gln Thr Ile  
 65 70 75

<210> 2161  
 <211> 159  
 <212> PRT  
 <213> Pinus radiata

<400> 2161  
 Arg Thr Pro Arg Cys Asp Gln Met Gly Leu Lys Lys Gly Pro Trp Thr  
 1 5 10 15  
 Pro Glu Glu Asp Gln Ile Leu Ile Ser Tyr Ile Asn Lys His Gly His  
 20 25 30  
 Gly Asn Trp Arg Ala Leu Pro Lys Gln Ala Gly Leu Met Arg Cys Gly  
 35 40 45  
 Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Ile Lys  
 50 55 60  
 Arg Gly Asn Phe Ser Leu Lys Glu Glu Gln Thr Ile Ile His Leu His

Met Gly Arg Gly Lys Ile Glu Ile Lys Lys Ile Asp Asp Val Thr Ser														
1				5					10				15	
Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Lys	Met	Gly	Ile	Phe	Lys	Ala
			20					25					30	
His	Glu	Leu	Ser	Val	Leu	Cys	Asp	Ala	Glu	Val	Ala	Val	Leu	Ile
		35				40					45			
Ser	Asn	Thr	Gly	Arg	Leu	Tyr	Asp	Tyr	Ala	Ser	Ser	Arg	Cys	Met
	50					55			60					
Arg	Thr	Ile	Glu	Arg	Tyr	Glu	Lys	Cys	Thr	Lys	Ala	Ile	Asn	Cys
65				70					75				80	
Thr	Ser	Asp	Pro	Ile	Val	Glu	Asn	Lys	Ser	Pro	Ile	Gln	Glu	Gly

				85						90					95				
Glu	Ile	Leu	Arg	Gln	Lys	Leu	Arg	Ala	Leu	Gln	Arg	Leu	Gln	Arg	Asn				
			100					105							110				
Leu																			

<210> 2165  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

<400> 2165

Thr	Lys	Ala	Ala	Ile	Lys	Arg	Leu	Gln	Ser	Gln	Ile	Met	Val	Ala	Phe				
1				5					10					15					
Gln	Ala	Val	Asp	Thr	Thr	Ser	Ala	Ala	Ile	Leu	Lys	Leu	Arg	Glu	Asp				
			20					25					30						
Glu	Leu	Tyr	Pro	Gln	Leu	Val	Glu	Leu	Ser	Lys	Gly	Leu	Met	Gln	Met				
		35					40					45							
Trp	Arg	Ala	Met	Tyr	Glu	Cys	His	Gln	Val	Gln	Asn	His	Ile	Val	Gln				
		50				55					60								
Gln	Val	Arg	His	Leu	Gly	Asn	Leu	Ala	Ser	Ala	Glu	Ala	Thr	Ser	Ser				
65					70					75					80				
Tyr	His	Gln	Gln	Ala	Thr	Ile	Gln	Leu	Glu	Ala	Gln	Val	Thr	Ala	Trp				
			85						90					95					
Tyr	Asp	Ser	Phe	Cys	Arg	Met	Ile	Thr	Ser	Gln									
			100					105											

<210> 2166  
 <211> 38  
 <212> PRT  
 <213> Pinus radiata

<400> 2166

Met	Gly	Ala	Pro	Lys	Gln	Lys	Trp	Thr	Ser	Glu	Glu	Glu	Gly	Ala	Leu				
1				5					10					15					
Arg	Ala	Gly	Val	Glu	Lys	Tyr	Gly	Ala	Gly	Lys	Trp	Gln	Thr	Ile	Leu				
			20					25					30						
Lys	Asp	Pro	Glu	Phe	Ala														
			35																

<210> 2167  
 <211> 158  
 <212> PRT  
 <213> Pinus radiata

<400> 2167

Ser	Gly	His	Met	Asp	Gly	Gly	Ser	Gly	Glu	Asp	Gln	Asp	Ala	Ala	Asp				
1				5					10					15					
Gln	Asp	His	Asp	His	Asp	His	Asp	His	Asp	His	Glu	Gln	Gln	Gln	Thr				
			20					25					30						
Arg	Arg	Lys	Arg	Tyr	His	Arg	His	Thr	Ala	Arg	Gln	Ile	Gln	Glu	Met				
		35					40					45							
Glu	Ala	Leu	Phe	Lys	Glu	Cys	Pro	His	Pro	Asp	Asp	Lys	Gln	Arg	Gln				
		50				55					60								
Arg	Leu	Ser	Ile	Glu	Leu	Gly	Leu	Lys	Pro	Arg	Gln	Val	Lys	Phe	Trp				
65					70					75					80				
Phe	Gln	Asn	Arg	Arg	Thr	Gln	Met	Lys	Ala	Gln	Gln	Asp	Arg	Ser	Asp				
			85						90					95					
Asn	Ala	Ile	Leu	Arg	Ala	Glu	Asn	Glu	Asn	Leu	Arg	Asn	Glu	Asn	Val				
			100					105					110						
Ala	Leu	Arg	Glu	Ala	Ile	Lys	Asn	Gly	Ala	Cys	Pro	Asn	Cys	Gly	Gly				

			115				120					125			
Ser	Thr	Ser	Leu	Gly	Glu	Met	Pro	Gly	Phe	Asp	Glu	His	His	Phe	Arg
		130				135					140				
Ile	Glu	Asn	Thr	Arg	Leu	Lys	Glu	Glu	Leu	Asp	Arg	Val	Ser		
145					150					155					

```
<210> 2168
<211> 122
<212> PRT
<213> Pinus radiata
```

<400> 2168															
Met	Gly	Cys	Thr	Gln	Gly	Gln	Arg	Gln	Gly	Glu	Trp	Glu	Gly	Lys	Gly
1				5					10					15	
Val	Pro	Ser	Asn	Ser	Ser	Arg	Arg	Ser	Leu	Arg	Lys	Gly	Leu	Trp	Ser
			20					25					30		
Pro	Asp	Glu	Asp	Ile	Glu	Leu	Thr	Thr	Tyr	Ile	Met	Arg	Lys	Gly	Leu
		35					40					45			
Met	Gly	Cys	Trp	Asn	Tyr	Ile	Ala	Lys	Gln	Ala	Gly	Leu	Gln	Arg	Cys
	50					55					60				
Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Ile	Asn	Tyr	Leu	Arg	Pro	Gly	Leu
65					70					75				80	
Lys	Arg	Cys	Ala	Ile	Ser	Pro	Gln	Glu	Glu	Arg	Leu	Ile	Ile	Gln	Leu
				85						90				95	
Gln	Ser	Ser	Leu	Gly	Asn	Arg	Trp	Ser	Gln	Ile	Ala	Ala	His	Leu	Pro
			100					105					110		
Gly	Arg	Thr	Asp	Asn	Glu	Val	Lys	Asn	Tyr						
		115					120								

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<210> 2169
<211> 101
<212> PRT
<213> Pinus radiata
```

[illegible]

```
<210> 2170
<211> 133
<212> PRT
<213> Pinus radiata
```

<400> 2170															
Arg	Leu	Leu	Pro	Gly	Arg	Thr	Asp	Asn	Ala	Ile	Lys	Asn	His	Trp	Asn
1				5					10					15	
Ser	Thr	Leu	Arg	Arg	Tyr	His	Gly	Glu	Lys	Asp	Gln	Ser	Asn	Gly	
			20				25					30			
Leu	Ala	Val	Asn	Leu	Glu	Ser	Ala	Ala	Glu	Asp	Lys	Glu	Thr	Met	Thr

```

      35              40              45
Pro Met Thr Pro Val Thr Ala Thr Ala Thr Ala Thr Ala Thr Ala Met
      50              55              60
Pro Val Ala Leu Val Phe Pro Thr Ala Ala Asp Asn Val Arg Lys Arg
65              70              75              80
Ser Asn Ser Ser Cys Ser Ala Asn Asp Asn Pro Gly Asp Ala Glu Val
      85              90              95
Glu Ser Cys Arg Leu Lys Arg Leu Asn Phe Ser Glu Ser Pro Ser Ser
      100              105              110
Ser Glu Asn Ile Asn Asn Asn Asn Asn Asn Glu Glu Ala Val Ser Gly
      115              120              125
His Cys Asn Ser Ala
      130

```

<210> 2171  
 <211> 120  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 2171
Met Arg Cys Lys Thr Gly Gln Ala Gln Gly Val Leu Glu Val Glu Gly
1              5              10              15
Thr His Pro Ala Pro Ser Lys Pro Lys Leu Arg Lys Gly Leu Trp Ser
      20              25              30
Pro Val Glu Asp Asn Gln Leu Thr Asn Tyr Ile Leu Arg Arg Gly Leu
      35              40              45
Val Gly Cys Trp Asn Tyr Val Ala Lys Gln Ala Gly Leu Gln Arg Thr
      50              55              60
Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Gly Leu
65              70              75              80
Lys Arg His Pro Ile Ser Arg Gln Glu Glu Gln Leu Ile Ile Glu Leu
      85              90              95
Gln Ser Ile Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala Gln Leu Pro
      100              105              110
Gly Arg Thr Asp Ile Glu Ile Lys
      115              120

```

<210> 2172  
 <211> 155  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 2172
Gln Gln Leu Glu Ser Ser Arg Ile Lys Leu Lys Gln Ile Glu Gln Glu
1              5              10              15
Leu Glu Arg Val Lys Gln Gln Gly Ile Ser Ile Asn Gly His Leu Gly
      20              25              30
Asp His Asn Gly Ser Gly Ala Ala Ala Phe Asp Met Glu Tyr Gly Arg
      35              40              45
Trp Val Glu Glu Gln Asn Arg Gln Ala Arg Glu Leu Arg Ala Ser Leu
      50              55              60
Gln Ala His Leu Thr Asp Ser Glu Leu Cys Val Leu Val Asp Asn Ala
65              70              75              80
Ile Ala His Tyr Asp Glu Leu Phe Arg Met Lys Gly Ala Ala Ser Lys
      85              90              95
Leu Asp Val Phe His Leu Met Ser Gly Met Trp Lys Thr Pro Thr Glu
      100              105              110
Arg Cys Phe Met Trp Met Gly Gly Phe Arg Pro Ser Glu Leu Leu Lys
      115              120              125
Ile Leu Thr Pro Gln Ile Glu Pro Leu Thr Glu Gln Gln Ser Phe Ala
      130              135              140

```

Val Ser Ser Leu Lys Leu Ser Ser Gln Gln Ala  
 145 150 155

<210> 2173  
 <211> 63  
 <212> PRT  
 <213> Pinus radiata

<400> 2173  
 Met Val Arg Gly Lys Ile Gln Met Lys Arg Ile Glu Asn Thr Ala Ser  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
 20 25 30  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Met Ile Phe  
 35 40 45  
 Ser Pro Gly Gly Lys Leu Tyr Glu Phe Ala Asn Thr Ser Met Glu  
 50 55 60

<210> 2174  
 <211> 76  
 <212> PRT  
 <213> Pinus radiata

<400> 2174  
 Arg Ala Arg Lys Thr Glu Ile Leu Val Thr Glu Ile Glu Gln Leu Gln  
 1 5 10 15  
 Arg Lys Glu Trp Ile Leu Ser Glu Glu Asn Ala Phe Leu Gly Lys Lys  
 20 25 30  
 Phe Val His Pro His Ser Val Ser Lys Thr Pro Gly Ser Glu Ser Gly  
 35 40 45  
 Ser Ile Gln Asn Ser Glu Val Glu Thr Gln Leu Val Met Arg Pro Pro  
 50 55 60  
 Cys Thr Asn Ala His Phe Leu Ile Asn Ser Ser His  
 65 70 75

<210> 2175  
 <211> 161  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2175  
 Arg Glu Ser Ala Asn Cys Ala Ser Arg Val Ala Asp Arg Arg Glu Asn  
 1 5 10 15  
 Arg Arg Arg Arg Asp Met Gly Asn Gln Lys Leu Lys Trp Thr Lys Glu  
 20 25 30  
 Glu Glu Glu Ala Leu Leu Ala Gly Ile Ala Lys His Gly Ala Gly Lys  
 35 40 45  
 Trp Lys Asn Ile Leu Lys Asp Pro Glu Phe Ala Pro Ala Leu Val Asn  
 50 55 60  
 Arg Ser Asn Ile Asp Leu Lys Asp Lys Trp Arg Asn Leu Ser Val Gly  
 65 70 75 80  
 Thr Ser Gly Gln Gly Ser Arg Asp Lys Gln Arg Leu Ser Lys Val Lys  
 85 90 95  
 Ser Leu Met Ala Ala Pro Gln Ser Ser Thr Val Pro Leu Asn Pro Gln  
 100 105 110  
 Ala His Ala Ala Ser Thr Asp Val Ala Leu Val Asn Ser Ser Asn Ser  
 115 120 125  
 Phe Gln Asp Gly Lys Asn Tyr Ser Leu Trp Val Ser Val Leu Leu Phe  
 130 135 140  
 Leu Phe Ser Asn Gly Asn Leu Phe Tyr Phe Tyr Pro Leu Leu Ser Phe  
 145 150 155 160



Leu

<210> 2176  
 <211> 31  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2176  
 Thr Arg Gln Ser Ala Arg Ala Leu Leu Ala Ile His Asp Tyr Phe Ser  
 1 5 10 15  
 Arg Leu Arg Ala Leu Ser Ser Leu Trp Leu Ala Arg Pro Arg Glu  
 20 25 30

<210> 2177  
 <211> 191  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2177  
 Met Ala Ser Arg Lys Glu Val Asp Arg Ile Lys Gly Pro Trp Ser Pro  
 1 5 10 15  
 Glu Glu Asp Glu Ala Leu Arg Leu Leu Val Gln Lys His Gly Pro Arg  
 20 25 30  
 Asn Trp Ser Leu Ile Ser Lys Ser Ile Pro Gly Arg Ser Gly Lys Ser  
 35 40 45  
 Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser Pro Gln Val Glu His Arg  
 50 55 60  
 Ala Phe Thr Pro Glu Glu Asp Asp Ile Ile Val Arg Ala His Ala Arg  
 65 70 75 80  
 Phe Gly Asn Lys Trp Ala Thr Ile Ala Arg Leu Leu Ser Gly Arg Thr  
 85 90 95  
 Asp Asn Ala Ile Lys Asn His Trp Asn Ser Thr Leu Lys Arg Lys Cys  
 100 105 110  
 Ser Pro Pro Leu Ser Pro Leu Ala Glu Glu Gly Asn Asn Arg Ala Phe  
 115 120 125  
 Asp Ala Ala Ala Gly Tyr Asp Gly Asp Leu Ser Pro Arg Glu Arg Pro  
 130 135 140  
 Ala Lys Arg Ser Ala Ser Ala Gly Pro Cys Leu Ser Pro Gly Ser Pro  
 145 150 155 160  
 Ser Gly Ser Gly Met Ser Asp Ser Ser Val His Phe Val Tyr Arg Pro  
 165 170 175  
 Val Ala Lys Thr Gly Pro Val Val Pro Pro Thr Val Glu Ala Thr  
 180 185 190

<210> 2178  
 <211> 113  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2178  
 Gln Val Ala Gln Leu Arg Val Glu Asn Ser Thr Leu Leu Lys Arg Leu  
 1 5 10 15  
 Ser Asp Ile Ser Gln Lys Tyr Asn Val Ala Ala Val Asp Asn Arg Val  
 20 25 30  
 Leu Lys Ala Asp Val Glu Thr Leu Arg Ala Lys Val Lys Met Ala Glu  
 35 40 45  
 Glu Thr Val Lys Arg Val Thr Gly Leu Asn Pro Met Leu His Val Met  
 50 55 60  
 Ser Asp Met Ser Ser Val Gly Val Pro Pro Phe Asp Gly Ser Pro Ser  
 65 70 75 80

Asp Thr Ser Ala Asp Ala Ala Val Pro Val Arg Asp Asp Pro Lys His  
                             85                            90                            95  
 Gln Phe Tyr Gln Thr Asn Ser Ser Asn Pro Ala Ser Ser Ala Asp Asp  
                             100                            105                            110  
 Met

<210> 2179  
 <211> 314  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2179  
 Met Lys Arg Leu Gly Ser Ser Asp Ser Leu Gly Ala Leu Met Ser Ile  
   1                            5                            10                            15  
 Cys Pro Pro Ser Glu Glu Leu Gln His Ser Pro Arg Asn Gly Asn Pro  
                             20                            25                            30  
 Ile Tyr His Ser Arg Asp Leu Gln Ser Met Leu Glu Leu Gly Leu Asp  
                             35                            40                            45  
 Glu Glu Gly Cys Val Glu Asp Gln Ser Ala Gly Gly Gly Gly His Val  
   50                            55                            60  
 Gly Gly Glu Lys Lys Arg Arg Leu Ser Ile Asp Gln Val Lys Ala Leu  
  65                            70                            75                            80  
 Glu Lys Asn Phe Glu Val Glu Asn Lys Leu Glu Pro Glu Arg Lys Val  
                             85                            90                            95  
 Lys Leu Ala Gln Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Val Trp  
                             100                            105                            110  
 Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Leu Glu Arg Asp  
                             115                            120                            125  
 Tyr Gly Val Leu Lys Ser Ser Tyr Glu Ala Leu Lys Leu Ser Tyr Asp  
  130                            135                            140  
 Ala Leu Lys His Asp Asn Glu Ala Leu His Lys Glu Ile Lys Glu Leu  
  145                            150                            155                            160  
 Lys Ser Lys Leu Arg Glu Glu Asp Asp Asn Pro Glu Ser Asn Leu Ser  
                             165                            170                            175  
 Val Lys Glu Glu Val Ile Ile Pro Gly His Asp Val Ser Asp Lys Ile  
                             180                            185                            190  
 Arg Ala Ala Asp Asp Gly Asp Asp Asp Thr Lys Arg Ser Pro Pro Pro  
                             195                            200                            205  
 Pro Ile Thr Ala Pro Pro Arg Glu Leu Ser Phe Asn Asn Gly Gly Leu  
  210                            215                            220  
 Lys Asp Gly Ser Ser Asp Ser Asp Ser Ser Ala Ile Val Asn Glu Glu  
  225                            230                            235                            240  
 Asn Ala Ala Thr Ser Ser Ser Ser Pro Asn Pro Ala Val Gln Ser His  
                             245                            250                            255  
 Gly Gly Phe Leu Lys Phe Met Gly Ser Ser Ser Ser Ser Ala Ser Pro  
                             260                            265                            270  
 Pro Pro Ser Pro Pro Ala Ser Phe Gly Gly Cys Phe Ser Phe Gln Phe  
                             275                            280                            285  
 Gln Arg Ala Tyr Gln Pro Gln Pro Gln Pro Pro His His His His His  
  290                            295                            300  
 His Ser Pro Tyr Val Lys Met Glu Glu His  
  305                            310

<210> 2180  
 <211> 94  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2180  
 Glu Arg Tyr Lys Ser Ala Cys Ser Asp Ser Ser His Pro Gln Ser Val

```

      1           5           10           15
Ser Asp Val Asn Thr Gln Phe Tyr Gln Gln Glu Ala Ser Lys Leu Arg
      20           25           30
Arg Gln Ile Arg Glu Ile Gln Val Ser Asp Arg His Leu Leu Gly Glu
      35           40           45
Gly Ile Ser Asp Leu Ser Phe Lys Asp Leu Lys Asn Leu Glu Ser Lys
      50           55           60
Leu Glu Lys Ser Ile Ser Arg Val Arg Ser Lys Lys Asn Glu Met Leu
      65           70           75           80
Phe Ala Glu Ile Glu Tyr Met Gln Lys Arg Gly Leu Val Gln
      85           90

```

<210> 2181  
 <211> 83  
 <212> PRT  
 <213> Eucalyptus grandis

```

      <400> 2181
Glu Asn Lys Ile Asn Arg Gln Val Thr Phe Ala Lys Arg Arg Asn Gly
      1           5           10           15
Leu Leu Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val
      20           25           30
Ala Leu Ile Ile Phe Ser Thr Arg Gly Lys Leu Tyr Glu Phe Cys Ser
      35           40           45
Ser Pro Ser Met Leu Lys Thr Leu Asp Arg Tyr Gln Lys Cys Ser Tyr
      50           55           60
Gly Ser Val Glu Val Asn Lys Pro Ser Lys Glu Leu Glu Asn Ala Tyr
      65           70           75           80
Arg Glu Tyr

```

<210> 2182  
 <211> 108  
 <212> PRT  
 <213> Eucalyptus grandis

```

      <400> 2182
Met Gly Arg Gly Lys Ile Glu Ile Gln Lys Ile Glu Asn Asp Thr Asn
      1           5           10           15
Arg Gln Val Thr Tyr Ser Lys Arg Arg Asn Gly Ile Phe Lys Lys Ala
      20           25           30
His Glu Leu Thr Val Leu Cys Asp Ala Arg Val Ser Ile Leu Met Leu
      35           40           45
Ser Gly Asn Lys Lys Leu His Glu Tyr Ile Ser Pro Thr Thr Thr
      50           55           60
Lys Arg Met Ile Asp Asp Tyr Gln Lys Ala Leu Gly Ile Asp Leu Trp
      65           70           75           80
Thr Thr His Tyr Asp Arg Met Gln Glu Glu Leu Arg Lys Leu Lys Glu
      85           90           95
Val Asn Asn Asn Phe Arg Lys Glu Ile Arg Gln Ile
      100           105

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<210> 2183  
 <211> 40  
 <212> PRT  
 <213> Eucalyptus grandis

```

      <400> 2183
Arg Asn Leu Met Gly Glu Asp Leu Gly Thr Leu Asn Ser Lys Glu Leu
      1           5           10           15
Glu Gln Leu Glu Arg Gln Leu Glu Ala Ser Leu Lys His Ile Arg Ser

```

20 25 30  
 Thr Lys Thr Thr Gln Cys Met Leu Asp  
 35 40

<210> 2184  
 <211> 161  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2184  
 Met Val Phe Pro Thr Gln Ala Thr Pro Glu Glu Ser Pro Gln Arg Lys  
 1 5 10 15  
 Met Gly Arg Gly Lys Ile Glu Ile Lys Arg Ile Glu Asn Thr Thr Asn  
 20 25 30  
 Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
 35 40 45  
 Tyr Glu Leu Ser Val Leu Cys Glu Ala Glu Val Ala Leu Ile Val Phe  
 50 55 60  
 Ser Ser Arg Gly Arg Leu Tyr Glu Tyr Ala Asn Asp Ser Val Lys Ala  
 65 70 75 80  
 Thr Ile Glu Arg Tyr Lys Lys Ala Cys Ser Asp Ser Ser Ser Ser Gly  
 85 90 95  
 Ser Val Ser Glu Ala Asn Val Gln Phe Tyr Gln Gln Glu Ser Ala Lys  
 100 105 110  
 Leu Gln Gln Gln Ile Asn Asn Met Gln Asn Asn Asn Arg Gln Leu Val  
 115 120 125  
 Gly Asp Ser Ile Ala Gly Met Asn Met Lys Asp Met Lys Thr Thr Glu  
 130 135 140  
 Gln Lys Leu Glu Lys Ala Ile Ala Lys Ile Arg Ala Lys Lys Asn Ala  
 145 150 155 160  
 Ile

<210> 2185  
 <211> 92  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2185  
 Gln His Lys Glu Gln Met Leu Val Glu Ala Asn Arg Glu Leu Arg Lys  
 1 5 10 15  
 Lys Leu Glu Glu Ser Asn Thr Arg Ile Pro Leu Arg Leu Gly Trp Glu  
 20 25 30  
 Ala Glu Asp His Asn Asn Ile Ser Tyr Ser Arg Leu Pro Met Gln Ser  
 35 40 45  
 Gln Gly Leu Ile Phe Gln Pro Leu Gly Gly Asn Pro Thr Leu Gln Ile  
 50 55 60  
 Gly Tyr Asn Pro Ala Gly Ser Asn Glu Leu Asn Val Ser Ala Ala Asp  
 65 70 75 80  
 Gln His Pro Asn Gly Phe Ile Pro Gly Trp Met Leu  
 85 90

<210> 2186  
 <211> 113  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2186  
 Gly Ser Lys Glu Leu Glu Ser Leu Glu Arg Gln Leu Asp Gly Ser Leu  
 1 5 10 15  
 Lys Gln Ile Arg Ser Arg Arg Thr Gln Tyr Met Leu Asp Lys Leu Thr

```

      20      25      30
Asp Leu Gln His Arg Glu Gln Leu Leu His Glu Ala Asn Arg Thr Leu
      35      40      45
Asn Gln Arg Leu Met Glu Gly Tyr Gln Val Asn Ala Leu Gln Leu Asn
      50      55      60
Gln His Ala Glu Glu Val Gly Gly Tyr Gly His Pro Pro Pro Pro Pro
65      70      75      80
Leu Pro Pro Gln Pro Leu Ala Gln Pro His Ser Glu Ala Phe Phe Asn
      85      90      95
Pro Leu Glu Cys Glu Pro Thr Leu Gln Met Gly Tyr Gln Pro Asp Pro
      100      105      110
Val

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<210> 2187
<211> 309
<212> PRT
<213> Eucalyptus grandis

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      <400> 2187
Met Thr Arg Arg Cys Ser His Cys Cys Asn Lys Gly His Asn Ser Arg
 1      5      10      15
Thr Cys Pro Val Arg Gly Gly Gly Gly Asp Gly Gly Gly Ala Ala Ala
      20      25      30
Ala Pro Ser Ser Ser Pro Ser Thr Ser Ser Ser Gly Ala Ala Ala
      35      40      45
Ala Ala Ala Ala Ser Ala Ser Gly Gly Gly Val Lys Leu Phe Gly Val
50      55      60
Arg Leu Thr Asp Gly Ser Ile Met Lys Lys Ser Ala Ser Val Gly Cys
65      70      75      80
Leu Ser Ala Ala His Tyr His Ser Ser Ser Ser Ala Ala Ala Ser Pro
      85      90      95
Asn Pro Gly Ser Ser Pro Ile Asp Gly Ser Asp Gly Tyr Leu Ser Asp
      100      105      110
Asp Pro Ala Pro Gly Ser Arg Ser Ser Asn Arg Arg Val Glu Arg Lys
      115      120      125
Lys Gly Asn Pro Trp Thr Glu Glu Glu His Arg Arg Phe Leu Ile Gly
130      135      140
Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asp Phe
145      150      155      160
Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr
      165      170      175
Tyr Ile Arg Gln Ser Asn Ala Gly Arg Arg Lys Arg Arg Ser Ser Leu
      180      185      190
Phe Asp Met Ala Pro Asp Met Ala Thr Ala Asp Gln Pro Ser His Pro
195      200      205
Glu Glu Thr Phe Leu Pro Pro Leu Val Arg Leu Asn Asp Asp Thr Asn
210      215      220
Ser Thr Thr Ser Thr Ser Met Gly Leu Asp Leu Glu Arg Thr Pro Met
225      230      235      240
Glu Thr Ser His Pro Glu Thr Ser Glu Gly Gly Gly Asp Val Ala Met
      245      250      255
Glu Ser Ile Asp Gln Val Pro Leu Val Pro Cys Tyr Phe Pro Tyr Tyr
260      265      270
Leu Pro Leu Pro Phe Pro Met Trp Pro Pro Asn Met Ala Pro Pro Glu
275      280      285
Asp Gly Arg Val Val Glu Thr Ser His His Arg Val Leu Lys Pro Ile
290      295      300
Pro Val Ile Pro Lys
305

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<210> 2188  
 <211> 123  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2188  
 Trp Asp Thr Ser Ser Ser Pro Pro Thr Leu Leu Glu Ser Val Asp Asn  
 1 5 10 15  
 Phe Ile Leu Ser Pro Ala Arg Thr Gly Lys Ala Glu Ser Glu Cys Leu  
 20 25 30  
 Ser Pro Arg Asn Ser Gly Leu Leu Asp Ala Leu Val His Glu Ser Lys  
 35 40 45  
 Thr Met Ser Ser Ala Lys Asn Asn Ser Pro Glu Lys Ser Thr Asn Ser  
 50 55 60  
 Ser Ala Leu Thr Pro Gly Asp Ile Ser Ser Ser Thr Leu Asp Ile Cys  
 65 70 75 80  
 Lys Ser Glu Trp Glu Glu Tyr Gly Asp Pro Ile Ser Pro Pro Gly His  
 85 90 95  
 Ser Ala Thr Ser Val Phe Asn Gly Cys Thr Pro Leu Ser Thr Ser Gly  
 100 105 110  
 Ser Ser Leu Asp Glu Gln Pro Tyr Pro Asp Thr  
 115 120

<210> 2189  
 <211> 136  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2189  
 His Ile Arg Arg Lys Leu Leu Asn Arg Gly Ile Asp Pro Ala Thr His  
 1 5 10 15  
 Arg Pro Leu Asn Glu Pro Ala Gln Asp Ala Thr Thr Ile Ser Phe Ala  
 20 25 30  
 Ala Ala Pro Ser Lys Gln Glu Pro Arg Asp Asp Ala Ile Ala Ala Ala  
 35 40 45  
 Leu Gly Tyr Lys Asn Glu Asn Asn Pro Thr Thr Thr Ala Ala Thr Val  
 50 55 60  
 Gln Glu Lys Cys Pro Asp Leu Asn Leu Glu Leu Arg Ile Ser Pro Pro  
 65 70 75 80  
 Cys Gln Gln Gln His Gln Pro Asp Ala Ser Met Gly Met Val Glu Gly  
 85 90 95  
 Asn His Cys Phe Ala Cys Ser Leu Gly Leu Gln Asn Ser Lys Glu Cys  
 100 105 110  
 Ser Cys Arg Arg Gly Ala Ser Gly Gly Ser Ser Ala His Gly Gly Tyr  
 115 120 125  
 Asp Phe Leu Gly Leu Lys Thr Ser  
 130 135

<210> 2190  
 <211> 109  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2190  
 Met Glu Phe Pro Ser Glu Phe Ser Glu Ala Ser Ser Gln Lys Arg Ile  
 1 5 10 15  
 Gly Gly Arg Gly Lys Ile Glu Ile Lys Arg Ile Glu Asn Thr Thr Asn  
 20 25 30  
 Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
 35 40 45  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe

	50					55					60					
Ser	Ser	Arg	Gly	Arg	Leu	Tyr	Glu	Tyr	Ala	Asn	Asn	Ser	Val	Arg	Gly	
65					70					75					80	
Thr	Ile	Glu	Arg	Tyr	Lys	Lys	Ala	Ser	Ser	Asp	Ser	Ser	Thr	Ser	His	
				85					90					95		
Ser	Pro	Phe	Pro	Glu	Val	Glu	His	Ser	Ser	Phe	Ile	Gln				
			100					105								

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<210> 2191
<211> 116
<212> PRT
<213> Eucalyptus grandis
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[illegible]

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<210> 2192
<211> 98
<212> PRT
<213> Eucalyptus grandis
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<400> 2192															
Met	Ala	Arg	Gly	Lys	Val	Gln	Met	Lys	Arg	Ile	Glu	Asn	Pro	Val	His
1				5					10					15	
Arg	Gln	Val	Thr	Phe	Cys	Lys	Arg	Arg	Ala	Gly	Leu	Leu	Lys	Lys	Ala
			20					25					30		
Lys	Glu	Leu	Ser	Val	Leu	Cys	Asp	Ala	Asp	Ile	Gly	Leu	Phe	Ile	Phe
		35					40					45			
Ser	Pro	His	Gly	Lys	Leu	Tyr	Glu	Leu	Ala	Thr	Lys	Gly	Thr	Met	Lys
	50					55					60				
Gly	Leu	Ile	Glu	Arg	Tyr	Met	Lys	Thr	Thr	Gln	Ser	Gln	Ala	Ala	Leu
65				70						75				80	
Thr	Glu	Glu	Ala	Thr	Pro	Ser	Gln	Pro	Leu	Asp	Ala	Lys	Glu	Glu	Ile
				85					90					95	
Asn Ile															

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<210> 2193
<211> 198
<212> PRT
<213> Eucalyptus grandis
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<400> 2193  
 Met Gly Arg Gly Lys Val Glu Leu Lys Arg Ile Glu Asn Lys Ile Asn  
 1 5 10 15  
 Arg Gln Val Thr Phe Ala Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala

20 25 30  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe  
 35 40 45  
 Ser Asn Arg Gly Lys Leu Tyr Glu Phe Cys Ser Ser Ser Ser Met Met  
 50 55 60  
 Lys Thr Ile Glu Lys Tyr Gln Lys Cys Ser Tyr Gly Ser Leu Glu Thr  
 65 70 75 80  
 Asn Cys Ser Ile Asn Glu Met Gln Asn Ser Tyr Gln Asp Tyr Leu Lys  
 85 90 95  
 Leu Lys Thr Arg Val Glu Val Leu Gln Arg Ser Gln Arg Asn Leu Leu  
 100 105 110  
 Gly Glu Glu Leu Gly Pro Leu Asn Ser Lys Glu Leu Glu Gln Leu Glu  
 115 120 125  
 His Gln Leu Glu Asn Ser Leu Lys Gln Ile Arg Ser Ala Lys Thr Gln  
 130 135 140  
 Phe Met Phe Asp Gln Leu Ala His Leu Gln His Lys Glu Gln Met Leu  
 145 150 155 160  
 Val Glu Ala Asn Arg Glu Leu Arg Lys Lys Leu Glu Glu Ser Asn Thr  
 165 170 175  
 Arg Ile Pro Leu Arg Leu Gly Trp Glu Ala Glu Asp His Asn Asn Ile  
 180 185 190  
 Ser Tyr Ser Arg Leu Pro  
 195

<210> 2194  
 <211> 153  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2194  
 Met Arg Lys Pro Cys Cys Asp Lys Arg Asp Thr Asn Lys Gly Ala Trp  
 1 5 10 15  
 Ser Lys Gln Glu Asp Gln Lys Leu Ile Asp Tyr Ile Gln Lys His Gly  
 20 25 30  
 Glu Gly Ser Trp Arg Thr Leu Pro Gln Ala Ala Gly Leu Leu Arg Cys  
 35 40 45  
 Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu  
 50 55 60  
 Lys Arg Gly Asn Phe Ala Glu Asp Glu Glu Asp Leu Ile Ile Lys Leu  
 65 70 75 80  
 His Ala Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu Pro  
 85 90 95  
 Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Ser His Leu Arg  
 100 105 110  
 Arg Lys Leu Leu Lys Met Gly Ile Asp Pro Asn Asn His Arg Leu Asn  
 115 120 125  
 Gln Asn Leu Pro Arg Ser Gln Thr Arg Met Pro Arg Gln His Phe Leu  
 130 135 140  
 Ile Gln Tyr Glu Asp His Met Thr Leu  
 145 150

<210> 2195  
 <211> 104  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2195  
 Glu Ala Leu Gln Gln Ser Leu Val Asp Thr Leu Ser Ser Thr Thr Leu  
 1 5 10 15  
 Ser Pro Thr Gly Ser Gly Asn Val Ala Glu Tyr Met Gly Gln Met Ala  
 20 25 30



```

Ile Ala Met Gly Lys Leu Ala Thr Leu Glu Asn Phe Val His Gln Ala
      35              40              45
Asp Leu Leu Arg Gln Gln Thr Leu Gln Gln Met His Arg Ile Leu Thr
      50              55              60
Thr Arg Gln Ala Ala Arg Ala Leu Leu Val Ile Asn Asp Tyr Ile Ser
      65              70              75              80
Arg Leu Arg Ala Leu Ser Ser Leu Trp Leu Ala Arg Pro Arg Thr Glu
      85              90              95
Asn Ile Cys Ser Ala Lys Leu Phe
      100

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<210> 2196
<211> 25
<212> PRT
<213> Eucalyptus grandis

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<400> 2196
Asp Pro Leu Met Lys Pro Trp Gln Ile Pro Cys Pro Ile Gln Pro Ile
      1              5              10              15
Ile Ala Ser Ala Asp Leu Phe Glu Cys
      20              25

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<210> 2197
<211> 87
<212> PRT
<213> Eucalyptus grandis

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<400> 2197
Met Gly Arg Arg Lys Ile Glu Ile Gln Pro Ile Thr His Glu Arg Asn
      1              5              10              15
Arg Ser Val Thr Phe Leu Lys Arg Lys Asn Gly Leu Phe Lys Lys Ala
      20              25              30
Tyr Glu Leu Gly Val Leu Cys Ser Val Asp Val Ala Val Ile Ile Phe
      35              40              45
Glu Asp Arg Pro Gly His Ser Pro Lys Leu Tyr Gln Tyr Ser Ser Arg
      50              55              60
Gly Ile Gln Asp Ile Val Gln Arg His Leu His His Asp Gly Glu Thr
      65              70              75              80
Asp Asn Arg Gly Pro Gly Asp
      85

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<210> 2198
<211> 107
<212> PRT
<213> Eucalyptus grandis

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<400> 2198
Arg Asp Arg Thr Phe Leu Val Gly Leu Glu Lys Leu Gly Lys Gly Asp
      1              5              10              15
Trp Arg Gly Ile Ser Arg Ser Tyr Val Thr Thr Arg Thr Pro Ala Gln
      20              25              30
Val Ala Ser His Ala Gln Lys Tyr Phe Leu Arg Gln Val Ser Phe Asn
      35              40              45
Lys Lys Lys Arg Arg Ser Ser Leu Phe Asp Met Val Lys Asn Gln Cys
      50              55              60
Ser Tyr Lys Leu Leu Pro Ser Tyr Arg Leu Ser Ser Ile Ser Leu Met
      65              70              75              80
Gly Phe Asp Lys Phe Leu Leu Tyr Lys Val Asp Val Lys Thr Ala Ala
      85              90              95
Gly Asp Arg Leu Gly Ser Leu Thr Ala Lys Pro
      100              105

```

<210> 2199  
 <211> 107  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2199  
 Met Thr Leu Glu Glu Phe Leu Val Arg Ala Gly Val Val Arg Glu Asp  
 1 5 10 15  
 Thr Gln Met Met Ala Arg Pro Gly Asp Asn Gly Val His Glu Met  
 20 25 30  
 Ser Gln Phe Thr Ser Asn Gly Leu Ala Ser Ser Ala Ala Ala Gly Asn  
 35 40 45  
 Asp Phe Ile Phe Ser Ser Lys Pro Ala Gly Ser Ser Leu Asp Phe Ile  
 50 55 60  
 Gly Thr Arg Pro Thr Gln Leu Gln Gln Gln Pro Gln Pro Gln Pro Leu  
 65 70 75 80  
 Glu Pro Pro Ala Pro Leu Phe Pro Lys Pro Glu Thr Val Ser Phe Ala  
 85 90 95  
 Thr Ser Val His Leu Pro Asn Thr Ala Ser Tyr  
 100 105

<210> 2200  
 <211> 150  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2200  
 Ala Asn Ala Pro Leu Arg Ile Ala Met Asn Ser Asn Ala Ser Ser Asn  
 1 5 10 15  
 Pro Gln Ser Met Ala Thr Ser Thr Thr Ser Ala Thr Thr Pro Ala Ala  
 20 25 30  
 Gly Gly Asp Gly Gly Lys Lys Val Arg Lys Pro Tyr Thr Ile Thr Lys  
 35 40 45  
 Ser Arg Glu Ser Trp Thr Glu Glu His Asp Lys Phe Leu Glu Ala  
 50 55 60  
 Leu Gln Leu Phe Asp Arg Asp Trp Lys Lys Ile Glu Asp Phe Val Gly  
 65 70 75 80  
 Ser Lys Thr Val Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe Leu  
 85 90 95  
 Lys Val Gln Lys Asn Gly Ala Val Ala His Val Pro Pro Pro Arg Pro  
 100 105 110  
 Lys Arg Lys Ala Ala His Pro Tyr Pro Gln Lys Ala Ser Lys Asn Val  
 115 120 125  
 Leu Val Pro Leu Gln Ala Ser Met Ala Gln Pro Ser Ser Thr Asn Pro  
 130 135 140  
 Ala Phe Thr Ile Thr Pro  
 145 150

<210> 2201  
 <211> 171  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2201  
 Met Gly Arg Ser Pro Cys Cys Glu Ser Glu His Met Asn Lys Gly Ala  
 1 5 10 15  
 Trp Ser Lys Glu Glu Asp Glu Arg Leu Ile Ala Tyr Ile Lys Arg His  
 20 25 30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
 35 40 45

Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
 50 55 60  
 Leu Lys Arg Gly Asn Phe Ser Asp Glu Glu Asp Glu Leu Ile Ile Thr  
 65 70 75 80  
 Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Ala Arg Leu  
 85 90 95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile  
 100 105 110  
 Lys Arg Lys Leu His Ala Arg Gly Ile Asp Pro Gln Thr His Arg Pro  
 115 120 125  
 Leu Arg Leu His Gln His Cys Trp Cys Trp Cys Cys His Phe Thr  
 130 135 140  
 Leu Ser Val Leu Thr Leu Thr Thr Ala Ala Thr Arg Pro Arg Leu Thr  
 145 150 155 160  
 Arg Arg Leu Val Lys Asn Tyr His His His Gln  
 165 170

<210> 2202  
 <211> 98  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2202  
 Met Asn Ser Pro Leu Ala Gln Leu Val Asn Pro Arg Arg Met His Thr  
 1 5 10 15  
 Tyr Glu Pro Phe Asp Gln Phe Pro Met Trp Gly Asp Thr Phe Lys Ala  
 20 25 30  
 Asp Lys Val Lys Asn Leu Glu Ala Ser Ser Ser Val Ile Val His Ala  
 35 40 45  
 Val Asp Asp Gly Leu Asp Lys Lys Phe Glu Tyr Val Ser His Glu Ser  
 50 55 60  
 Ala Glu Asn Ser Ser Ser Arg Ser Asp Gln Glu Ala Asn Arg Pro Asp  
 65 70 75 80  
 Lys Val Gln Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser  
 85 90 95  
 Arg Leu

<210> 2203  
 <211> 111  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2203  
 Met Asn Ser Pro Leu Ala Gln Leu Val Asn Pro Arg Arg Met His Thr  
 1 5 10 15  
 Tyr Glu Pro Phe Asp Gln Phe Pro Met Trp Gly Asp Thr Phe Lys Ala  
 20 25 30  
 Asp Lys Val Lys Asn Leu Glu Ala Ser Ser Ser Val Ile Val His Ala  
 35 40 45  
 Val Asp Asp Gly Leu Asp Lys Lys Phe Glu Tyr Val Ser His Glu Ser  
 50 55 60  
 Ala Glu Asn Ser Ser Ser Arg Ser Asp Gln Glu Ala Asn Arg Pro Asp  
 65 70 75 80  
 Lys Val Gln Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser  
 85 90 95  
 Arg Leu Arg Lys Lys Lys Tyr Val Gln Gln Leu Glu Ser Ser Arg  
 100 105 110

<210> 2204  
 <211> 162

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2204

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Met Ala Ser Ser Ser Ser Val Ala Ser Ala Arg Lys Asp Ala Asp Arg
 1           5           10           15
Ile Lys Gly Pro Trp Ser Pro Glu Glu Asp Glu Ala Leu Gln Arg Leu
          20           25           30
Val Gln Ser Tyr Gly Pro Arg Asn Trp Ser Leu Ile Ser Lys Ser Ile
          35           40           45
Pro Gly Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu
          50           55           60
Ser Pro Gln Val Glu His Arg Pro Phe Thr Pro Glu Glu Asp Glu Ala
65           70           75           80
Ile Val Arg Ala His Ala Arg Phe Gly Asn Lys Trp Ala Thr Ile Ala
          85           90           95
Arg Leu Leu Asn Gly Arg Thr Asp Asn Ala Val Lys Asn His Trp Asn
          100          105          110
Ser Thr Leu Lys Arg Lys Cys Ser Ser Thr Cys Ser Ala Gly Gly Asp
          115          120          125
Asp Ala Asp Ala Leu Ala Glu Gln Gln Pro Leu Lys Arg Ser Ala Ser
          130          135          140
Leu Gly Thr Pro Thr Gly Gly Asn Asn Ala Val Ser Asp Leu Phe Phe
145          150          155          160
Ser Pro

```

&lt;210&gt; 2205

&lt;211&gt; 92

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2205

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Met Ala Lys Glu Lys Ile Lys Ile Lys Lys Ile Asp Asn Leu Thr Ala
 1           5           10           15
Arg Gln Val Thr Phe Ser Lys Arg Arg Arg Gly Leu Ile Lys Lys Ala
          20           25           30
Glu Glu Leu Ser Val Leu Cys Asp Ala Asp Val Ser Leu Ile Val Phe
          35           40           45
Ser Ala Thr Gly Lys Leu Tyr Asp Phe Ser Ser Ser Arg Gln Met Lys
          50           55           60
Gly Glu Asp Leu Glu Gly Leu Asn Val Glu Glu Leu Asp Gln Leu Glu
65           70           75           80
Lys Lys Leu Glu Ala Gly Leu Ser Leu Val Ile Lys
          85           90

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&lt;210&gt; 2206

&lt;211&gt; 148

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2206

```

Met Arg Lys Pro Asp Ala Ser Gly Lys Asn Ser Ser Asn Ser Asn Ala
 1           5           10           15
Asn Lys Leu Arg Lys Gly Leu Trp Ser Pro Glu Glu Asp Asp Lys Leu
          20           25           30
Met Asn Tyr Met Leu Asn Asn Gly Gln Gly Cys Trp Ser Asp Val Ala
          35           40           45
Arg Asn Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp
          50           55           60
Ile Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Ala Phe Ser Pro Gln

```

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65          70          75          80
Glu Glu Glu Leu Ile His Leu His Ser Ile Leu Gly Asn Arg Trp
          85          90          95
Ser Gln Ile Ala Ala Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys
          100          105          110
Asn Phe Trp Asn Ser Thr Ile Lys Lys Arg Ser Arg Thr Arg His His
          115          120          125
Leu Leu Val Asp Thr Arg Gln Thr Arg Ala Ile Leu Leu Ala Ser Asp
          130          135          140
Val Lys Asp Val
145

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<210> 2207
<211> 73
<212> PRT
<213> Eucalyptus grandis

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<400> 2207
Ala Pro Glu Ile Ala Pro Pro Leu Ala Ala Pro Arg Gly Gly His His
 1          5          10          15
Arg Arg Ala His Ser Glu Val Asn Phe Arg Ile Pro Glu Asp Leu Asp
          20          25          30
Leu Gly Pro Asp Pro Phe Glu Asn Gly Pro Ser Gly Ser Phe Glu Asp
          35          40          45
Phe Gly Ser Glu Asp Asp Leu Leu Ser Thr Tyr Met Asp Ile Glu Lys
          50          55          60
Phe Gly Ser Ser Ser Thr Arg Ala Gly
65          70

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<210> 2208
<211> 147
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 2208
Ser Glu Asn Val Ser Gly Gly Ala Ile Glu Arg Pro Arg Ala Thr Gly
 1          5          10          15
Lys Leu Ala Ala Pro Val Asn Ser Pro Ser Met Ser Ser Ser Leu Asp
          20          25          30
Leu Lys Asn Ser Cys Met Asp Ala Asn Ala Asn Pro Val Ser Ile Leu
          35          40          45
Gln Pro Gly Val Val Pro Pro Glu Ala Trp Leu Gln Val Met Ser Leu
          50          55          60
Cys Gly Arg Leu Leu Lys Ile Phe Pro Trp Lys Ala Ser Thr Ser Val
65          70          75          80
Leu Ser Ala Val Ser Ser Ser Cys Ser Leu Gln Tyr His Arg Leu Cys
          85          90          95
Phe Ser Lys Phe Ala Leu Cys Lys Asn Glu Arg Glu Leu Lys Arg Glu
          100          105          110
Arg Arg Lys Gln Ser Asn Arg Glu Ser Ala Arg Arg Ser Arg Leu Arg
          115          120          125
Lys Gln Ala Glu Thr Glu Glu Leu Gly Lys Lys Val Asp Ser Leu Ser
          130          135          140
Ala Glu Asn
145

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<210> 2209
<211> 115
<212> PRT
<213> Eucalyptus grandis

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&lt;400&gt; 2209

Phe Phe Leu Tyr Ile Ile Ser Leu Phe Leu Val Arg Glu Asn Ser Glu  
 1 5 10 15  
 Arg Ser Arg Glu Gly Thr Ser Ser Asn Gly Asp Gly Lys Ser Glu Val  
 20 25 30  
 Gln Gly Lys Val Ala Gly Glu Val Asp Ala Ala Ser Glu Asn Val Ser  
 35 40 45  
 Gly Gly Ala Ile Glu Arg Pro Arg Ala Thr Gly Lys Leu Ala Ala Pro  
 50 55 60  
 Val Asn Ser Pro Ser Met Ala Ser Ser Leu Asp Leu Lys Asn Ser Cys  
 65 70 75 80  
 Met Asp Ala Asn Ala Asn Pro Val Ser Ile Leu Gln Pro Gly Val Val  
 85 90 95  
 Pro Pro Glu Ala Trp Leu Gln Asn Glu Arg Glu Leu Lys Arg Glu Arg  
 100 105 110  
 Arg Glu Gln  
 115

&lt;210&gt; 2210

&lt;211&gt; 192

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2210

Met Gly Arg Gln Pro Cys Cys Asp Lys Ser Gly Val Lys Lys Gly Pro  
 1 5 10 15  
 Trp Thr Ala Glu Glu Asp Lys Lys Leu Ile Asn Phe Ile Leu Thr Asn  
 20 25 30  
 Gly His Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Arg Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp  
 50 55 60  
 Leu Lys Arg Gly Leu Leu Ser Glu Ala Glu Glu Gln Leu Val Ile Asp  
 65 70 75 80  
 Leu His Ala Arg Leu Gly Asn Arg Trp Ser Lys Ile Ala Ala Arg Leu  
 85 90 95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn His Trp Asn Thr His Ile  
 100 105 110  
 Lys Lys Lys Leu Leu Lys Met Gly Ile Asp Pro Val Thr His Glu Pro  
 115 120 125  
 Leu Asn Lys Pro Gln Lys Thr Pro Ser Glu His Asp Pro Glu Ala Ser  
 130 135 140  
 Leu Ser Ser Ser Gln Ala Asp Pro Thr Ser Glu Ser Pro Ala Asn Thr  
 145 150 155 160  
 His Gln Pro Asn Asn Ala His Ala Asp Glu Val Gln Leu Val Leu Val  
 165 170 175  
 Leu Pro Val Gly Leu Val Arg Arg Glu Leu Leu Leu Arg Gln Gly Arg  
 180 185 190

&lt;210&gt; 2211

&lt;211&gt; 89

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2211

Leu Ser Arg Asn Met Asp Asp Val Phe Val Gln Arg Cys Asn Arg Asn  
 1 5 10 15  
 Phe Thr Ala Arg Asp Arg Leu Ile Ser Lys Glu Arg Arg Asn Phe Gly  
 20 25 30  
 Trp Val Cys Gly Val Thr Glu Glu Glu Glu Leu Ile Ile Arg Met  
 35 40 45

Tyr Lys Leu Val Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu Pro  
 50 55 60  
 Gly Arg Lys Ala Glu Glu Ile Glu Arg Tyr Trp Lys Met Arg Ser Ile  
 65 70 75 80  
 Asn Ala Ala Pro Leu Lys Pro Asn Thr  
 85

<210> 2212  
 <211> 237  
 <212> PRT  
 <213> Pinus radiata

<400> 2212  
 Met Val Lys Glu Leu Leu Met Met Cys Ser Asn Cys Gly His Ser Gly  
 1 5 10 15  
 His Ser Ser Arg Ala Cys Pro Asp Arg Gly Ser Val Lys Leu Phe Gly  
 20 25 30  
 Val Arg Leu Ile Ala Thr Asp Asp Gly Met Ala Cys Met Arg Lys Ser  
 35 40 45  
 Leu Ser Met Gly Asn Leu Gly His Tyr Arg Ser Leu Tyr Asn Val Asn  
 50 55 60  
 His Cys Ser Gly Thr Ser Glu Cys Gly Ser Ala Asp Gln Asp Gly Tyr  
 65 70 75 80  
 Leu Ser Asp Gly Phe Val His Ser Ser Ser Asn Ala Arg Glu Arg Lys  
 85 90 95  
 Lys Gly Val Pro Trp Ser Glu Glu Glu His Arg Met Phe Leu Tyr Gly  
 100 105 110  
 Leu Glu Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn Phe  
 115 120 125  
 Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr  
 130 135 140  
 Phe Leu Arg Gln Ser Asn Leu Asn Lys Arg Lys Arg Arg Ser Ser Leu  
 145 150 155 160  
 Phe Asp Met Cys Pro His Asp Ser His Val Thr Ser Ser Phe Arg Arg  
 165 170 175  
 Glu Asp Ser Leu Gly Asn Leu Tyr Glu Phe Ser Pro Lys His Ser Ala  
 180 185 190  
 Leu Gly Val Ser Pro Asn Phe Glu Leu Tyr Ser Phe Gly Val Ser Pro  
 195 200 205  
 Thr Leu Ser Leu Gly Arg Ser Leu Gln Pro Val Glu Ala Val Leu Glu  
 210 215 220  
 Glu Lys Ala Ala His Tyr His Pro Val Asn Ser Glu Glu  
 225 230 235

<210> 2213  
 <211> 55  
 <212> PRT  
 <213> Pinus radiata

<400> 2213  
 Trp Leu Gln Leu Cys Ser Gly Ile Asp Glu His Ala Ala Gly Phe Cys  
 1 5 10 15  
 Ser Gln Leu Val Phe Ala Pro Ile Asp Ala Ser Phe Ala Asp Asp Ala  
 20 25 30  
 Pro Leu Ala Pro Ser Gly Phe Arg Val Ile Pro Leu Glu Ser Gly Ser  
 35 40 45  
 Glu Cys Phe Ser Ser Lys Thr  
 50 55

<210> 2214  
 <211> 119

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2214

Gly Val Leu Lys Phe Pro Cys Phe Asp Leu Ile Thr Met Asn Leu Met  
 1 5 10 15  
 Glu Ser Phe Glu Ala Lys Gly Lys Gly Glu Lys Arg Arg Thr Val Arg  
 20 25 30  
 Gly Lys Thr Gln Leu Lys Arg Ile Glu Asn Gly Thr Ser Arg Gln Val  
 35 40 45  
 Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu  
 50 55 60  
 Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe Ser Pro Arg  
 65 70 75 80  
 Gly Lys Leu Tyr Glu Phe Ala Asn Pro Ser Met Gln Lys Met Leu Glu  
 85 90 95  
 Arg Tyr Glu Lys Cys Ser Glu Gly Ser Asn Pro Thr Ser Thr Ala Lys  
 100 105 110  
 Glu Gln Asp Val Gln Cys Leu  
 115

&lt;210&gt; 2215

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2215

Pro Lys Gln Asp Gln Lys Leu Val Thr Tyr Ile Gln Glu His Gly His  
 1 5 10 15  
 Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly Leu Leu Arg Cys Gly  
 20 25 30  
 Lys Ser Cys Arg Leu Arg Trp Ala Asn Tyr Leu Arg Pro Asp Ile Lys  
 35 40 45  
 Arg Gly Lys Phe Thr Val Gln Glu Glu Gln Thr Ile Ile Gln Leu His  
 50 55 60  
 Ala Leu Leu Gly Asn Arg Trp Ser Ala Ile Ala Thr His Leu Pro Lys  
 65 70 75 80  
 Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Leu Lys Lys  
 85 90 95  
 Arg Leu Leu Gln Met Gly Ile Asp Pro Val Thr His Lys Pro Lys Ser  
 100 105 110  
 Glu Ser Ile Met Val Pro Gly Val Gln Ser Ser Asn Gly Ser Ser Asn  
 115 120 125  
 Leu Ser His Met Ala Gln Trp Glu Ser Ala Arg Leu Glu Ala Glu Ser  
 130 135 140  
 Lys Ala  
 145

&lt;210&gt; 2216

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2216

Gly Ile Phe Ile Gly Gly Ser Cys Val Gly Gly Asp Gln Ser His Ser  
 1 5 10 15  
 Met Ser Gly Asn Gly Ala Leu Ala Phe Asp Met Glu Tyr Ala Arg Trp  
 20 25 30  
 Leu Asp Glu His His Arg Gln Ile Asn Glu Leu Arg Ser Ala Val Asn  
 35 40 45  
 Ser His Val Gly Asp Asn Glu Leu Arg Gly Leu Val Glu Gly Val Met



50					55					60					
Gly	His	Tyr	Asp	Glu	Ile	Phe	Arg	Leu	Lys	Thr	Val	Ala	Ser	Lys	Ala
65					70					75					80
Asp	Val	Phe	His	Leu	Val	Ser	Gly	Met	Trp	Lys	Thr	Pro	Ala	Glu	Arg
			85						90					95	
Cys	Phe	Met	Trp	Met	Gly	Gly	Phe	Arg	Pro						
			100					105							

<210> 2217  
 <211> 114  
 <212> PRT  
 <213> Pinus radiata

<400> 2217

Asn	Arg	Arg	Ala	Arg	Thr	Lys	Trp	Lys	Arg	Asn	Glu	Val	Glu	Cys	Asp
1				5					10					15	
Asn	Leu	Lys	Arg	Cys	Cys	Glu	Ser	Leu	Arg	Glu	Glu	Asn	Arg	Arg	Leu
			20					25					30		
Glu	Lys	Glu	Val	Gln	Ser	Leu	Arg	Ala	Met	Lys	Val	Pro	Gln	Ser	Pro
			35				40					45			
Asn	Ser	Met	Pro	Leu	Ala	Ala	Ala	Thr	Leu	Ala	Met	Cys	Pro	Ala	Cys
			50			55					60				
Glu	Gly	Leu	Ala	Ile	Lys	Asn	Arg	Gly	Ala	Ala	Thr	Ser	Ser	Thr	Ala
65					70					75					80
Lys	Ser	Gln	Gln	Ser	Leu	Leu	Thr	Ile	Met	Gly	Ile	Gly	Asp	Val	Asn
			85					90					95		
Met	Ile	Ser	Lys	Asn	Asn	Gln	Thr	Pro	Ser	Met	Gly	Met	Gly	Asp	Glu
			100					105					110		
Met	Asn														

<210> 2218  
 <211> 126  
 <212> PRT  
 <213> Pinus radiata

<400> 2218

Trp	Asn	Leu	Ile	Glu	Glu	Lys	Ile	Glu	Gly	Arg	Ser	Gly	Lys	Ser	Cys
1				5					10					15	
Arg	Leu	Arg	Trp	Phe	Asn	Gln	Leu	Asp	Pro	Arg	Ile	Asn	Arg	Arg	Pro
			20					25					30		
Phe	Thr	Glu	Glu	Asp	Glu	Glu	Lys	Leu	Leu	Ala	Ala	His	Arg	Leu	Tyr
			35				40					45			
Gly	Asn	Lys	Trp	Ala	Met	Ile	Ala	Arg	Leu	Phe	Pro	Gly	Arg	Thr	Asp
			50			55				60					
Asn	Ala	Val	Lys	Asn	His	Trp	His	Val	Ile	Met	Ala	Arg	Arg	Tyr	Arg
65				70						75					80
Glu	Gln	Ser	Ser	Ala	Phe	Gly	Arg	Arg	Lys	Leu	Pro	Gln	Val	His	Arg
			85					90					95		
Arg	Glu	Lys	Arg	Ala	Cys	Thr	Asp	Asp	Glu	Thr	Arg	Met	Gly	Ser	Ser
			100					105					110		
Ser	Cys	Asn	Met	Trp	Val	Asp	Lys	Tyr	Ser	Ser	Leu	Lys	Ser		
			115				120					125			

<210> 2219  
 <211> 123  
 <212> PRT  
 <213> Pinus radiata

<400> 2219

Leu	Ile	Ala	Tyr	Ile	Arg	Ala	Asn	Gly	Glu	Gly	Ser	Trp	Arg	Ser	Leu
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

```

      1           5           10           15
Pro Lys Ala Ala Gly Leu Pro Arg Cys Gly Lys Ser Cys Arg Leu Arg
      20           25           30
Trp Ile Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Ser Phe Thr Glu
      35           40           45
Glu Glu Asp Glu Leu Ile Ile Lys Leu His Ser Val Val Gly Asn Lys
      50           55           60
Trp Ser Leu Ile Ala Gly Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile
      65           70           75           80
Lys Asn Tyr Trp Asn Thr His Ile Lys Arg Lys Leu Leu Ile Lys Gly
      85           90           95
Ile Asp Pro Gln Ser His Arg Pro Leu Gly Gln Pro Tyr Ser Ser Asn
      100           105           110
Asn Met Pro Val Ser Arg Leu Phe Leu Thr Ser
      115           120

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&lt;210&gt; 2220

&lt;211&gt; 176

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2220

```

Leu Ser Asn Ile Glu Pro Lys Gln Ile Lys Val Trp Phe Gln Asn Arg
      1           5           10           15
Arg Cys Arg Glu Lys Gln Arg Lys Glu Ala Ser Arg Leu Gln Thr Val
      20           25           30
Asn Arg Lys Leu Thr Ala Met Asn Lys Leu Leu Met Glu Glu Asn Asp
      35           40           45
Arg Leu Gln Lys Gln Val Ser Gln Leu Val Tyr Glu Asn Gly Tyr Met
      50           55           60
Arg Gln Gln Leu Gln Asn Ala Ser Val Ala Ala Thr Asp Thr Ser Cys
      65           70           75           80
Glu Ser Val Val Thr Ser Gly Gln His Gln His Asn Pro Thr Pro Gln
      85           90           95
His Pro Pro Arg Asp Ala Ser Pro Ala Gly Leu Leu Ser Ile Ala Glu
      100           105           110
Glu Thr Leu Thr Glu Phe Leu Ser Lys Ala Lys Gly Ala Ala Val Asp
      115           120           125
Trp Val Gln Met Pro Gly Met Lys Pro Gly Pro Asp Ser Ile Gly Ile
      130           135           140
Val Ala Ile Ser Asn Thr Cys Asn Gly Val Ala Ala Arg Ala Cys Gly
      145           150           155           160
Leu Val Gly Leu Asp Pro Thr Lys Val Ala Glu Ile Leu Lys Asp Arg
      165           170           175

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&lt;210&gt; 2221

&lt;211&gt; 119

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2221

```

Leu Tyr Gln Cys Gln Ala Leu Phe Glu Asn Gly Ala Val Glu Lys Leu
      1           5           10           15
Ser Arg Thr Tyr Asn Asp Leu Tyr Asp Asp Leu Lys Glu Glu Ile Leu
      20           25           30
Ser Trp Leu Pro Val Glu Cys Val Cys Arg Phe Arg Ser Val Ser Lys
      35           40           45
Gln Trp Asn Asn Leu Leu Ser Ser His Asn Phe Ile Lys Lys Val Trp
      50           55           60
Arg Lys Lys Pro Ala Asn Met Asn Pro Trp Leu Val Leu His Pro Val
      65           70           75           80

```

Asn Ser Ser Tyr Cys Leu Ala Tyr Cys Phe Phe Thr Arg Thr Trp Lys  
                   85                  90                  95  
 Thr Thr Ser Ser Ile Ser Ile Glu Asn Ala Asn Asn Tyr Gly Glu Asn  
                   100                  105                  110  
 Gly Ile Leu Gly Ile Ser Cys  
                   115

<210> 2222  
 <211> 124  
 <212> PRT  
 <213> Pinus radiata

<400> 2222  
 Asp Lys Lys Leu Ile Asn Phe Leu Thr Thr His Gly Gln Cys Cys Trp  
   1                  5                  10                  15  
 Arg Thr Val Pro Glu Leu Ala Gly Ile Ser Arg Cys Gly Lys Ser Cys  
                   20                  25                  30  
 Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Val  
                   35                  40                  45  
 Phe Ser Glu Ser Glu Glu Lys Leu Ile Leu Asp Leu His Ser Arg Val  
                   50                  55                  60  
 Gly Asn Arg Trp Ser Lys Ile Ala Ser Phe Leu Pro Gly Arg Thr Asp  
   65                  70                  75                  80  
 Asn Glu Leu Lys Asn Tyr Trp Asn Thr His Ile Lys Lys Lys Leu Lys  
                   85                  90                  95  
 Arg Met Gly Leu Asp Pro Gly Asp Ala Gln Ala Ile Ser Glu Thr Leu  
                   100                  105                  110  
 Pro Gln Pro Ala Pro Val Ala Glu Asn Asn Asp Val  
                   115                  120

<210> 2223  
 <211> 175  
 <212> PRT  
 <213> Pinus radiata

<400> 2223  
 Met Lys Gly Lys Ser Pro Gly His Asp Glu Pro Asp Arg Ile Lys Gly  
   1                  5                  10                  15  
 Pro Trp Ser Pro Glu Glu Asp Ala Ala Leu Gln His Phe Val Gln Lys  
                   20                  25                  30  
 Tyr Gly Pro Arg Asn Trp Ser Leu Ile Ser Lys Ala Ile Pro Gly Arg  
                   35                  40                  45  
 Ser Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser Pro Gln  
                   50                  55                  60  
 Val Glu His Arg Pro Phe Thr Pro Glu Glu Asp Ala Thr Ile Val Arg  
   65                  70                  75                  80  
 Ala His Ala Gln His Gly Asn Lys Trp Ala Thr Ile Ala Arg Met Leu  
                   85                  90                  95  
 Ser Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn Ser Thr Leu  
                   100                  105                  110  
 Arg Arg Arg Cys Gln Gly Gly Gly Ala Leu Val Ile Asp Asp Glu Ile  
                   115                  120                  125  
 Ser Ser Gly Ala Asp Gly Phe Arg Lys Arg Asn Leu Ser Glu Asp Ala  
                   130                  135                  140  
 Asp Ala Ser Arg Lys Phe Lys Lys Leu Ser Leu Gly Thr Thr Thr Thr  
   145                  150                  155                  160  
 Thr Thr Thr Thr Glu Pro Ser Thr Ser Ser Ala Ser Asp Arg Ser  
                   165                  170                  175

<210> 2224  
 <211> 103

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2224

```

Met Ser Ser Arg Ser Cys Ser Leu Cys Gly Leu Asn Gly His Asn Ser
 1           5           10           15
Arg Thr Cys Val Gly Ser Gly Val Met Leu Phe Gly Val Arg Leu Thr
      20           25           30
Asp Gly Pro Met Arg Lys Ser Ala Ser Met Asn Asn Leu Ser Asn Leu
      35           40           45
Ser Gln Tyr Glu His Ser Asp Pro Ala Glu Val Ala Ala Glu Gly Phe
      50           55           60
Asp Gly Tyr Val Ser Asp Asp Leu Val His Ser Ser Ser Asn Ala Arg
65           70           75           80
Glu Arg Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe
      85           90           95
Leu Val Gly Leu Gln Arg Val
      100

```

&lt;210&gt; 2225

&lt;211&gt; 96

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2225

```

Met Ser Ser Arg Ser Cys Ser Leu Cys Gly Leu Asn Gly His Asn Ser
 1           5           10           15
Arg Thr Cys Val Gly Ser Gly Val Met Leu Phe Gly Val Arg Leu Thr
      20           25           30
Asp Gly Pro Met Arg Lys Ser Ala Ser Met Asn Asn Leu Ser Asn Leu
      35           40           45
Ser Gln Tyr Glu His Ser Asp Pro Ala Glu Val Ala Ala Glu Gly Phe
      50           55           60
Asp Gly Tyr Val Ser Asp Asp Leu Val His Ser Ser Ser Asn Ala Arg
65           70           75           80
Glu Arg Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe
      85           90           95

```

&lt;210&gt; 2226

&lt;211&gt; 131

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2226

```

Arg Gly Arg Val Gln Leu Arg Arg Ile Glu Asn Lys Ile Ser Arg Gln
 1           5           10           15
Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Met Lys Lys Ala Ala Glu
      20           25           30
Leu Ser Ile Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe Ser Asn
      35           40           45
Lys Asp Lys Leu Tyr Glu Phe Ala Ser Ser Ser Met Thr Lys Ile Leu
      50           55           60
Glu Arg Tyr Arg Lys Arg Ser Asn Leu Ile Gln Asp Ile Gly Lys Asp
65           70           75           80
Pro Gln Asn Ser Asp Ile Glu Leu Thr Arg Leu Lys Glu Glu Val Asp
      85           90           95
Arg Leu Gln Arg Ser Arg Arg His Leu Leu Gly Glu Asp Leu His Gln
      100           105           110
Leu Gly Ala Thr Asp Leu Gln His Leu Glu Gln Gln Leu Glu Glu Ala
      115           120           125
Leu Gln Lys

```

130

<210> 2227  
 <211> 49  
 <212> PRT  
 <213> Pinus radiata

<400> 2227  
 Met Pro Ser Ile Met Glu Lys Gln Asn Ser Gly Glu Asp Ser Asp Ser  
 1 5 10 15  
 Lys Gly Gln Leu Asp Asn Gly Lys Tyr Val Arg Tyr Thr Asn Glu Gln  
 20 25 30  
 Val Glu Thr Leu Glu Arg Ala Tyr Asn Glu Cys Ser Lys Pro Ser Thr  
 35 40 45  
 Arg

<210> 2228  
 <211> 128  
 <212> PRT  
 <213> Pinus radiata

<400> 2228  
 Lys Ile Glu Asn Thr Thr Ser Arg Gln Val Thr Phe Cys Lys Arg Lys  
 1 5 10 15  
 Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu Ser Leu Leu Cys Asp Ala  
 20 25 30  
 Glu Val Ala Leu Leu Ile Phe Ser Thr Ser Gly Arg Leu Tyr Glu Phe  
 35 40 45  
 Ala Asn Lys Ser Val Ser Ala Thr Thr Glu Arg Tyr Met Arg Thr Tyr  
 50 55 60  
 Ala Glu Asn Met Pro Gln Ser Arg Ala Leu Tyr Pro Asp Cys His His  
 65 70 75 80  
 Trp Gln Glu Glu Val Arg Lys Leu Thr Gln Gln Arg Asp Ser Leu Thr  
 85 90 95  
 Asn Ser Ile Arg Gln Ile Met Gly Glu Gly Leu Glu Ser Leu Ser Met  
 100 105 110  
 Lys Glu Leu Lys His Ile Gln Val Gln Leu Glu Lys Ser Ile Ser Cys  
 115 120 125

<210> 2229  
 <211> 181  
 <212> PRT  
 <213> Pinus radiata

<400> 2229  
 Glu Asp Leu Asp Asp Cys Ile His Pro Pro Glu Lys Lys Arg Arg Leu  
 1 5 10 15  
 Thr Ala Asp Gln Val Gln Phe Leu Glu Arg Ser Phe Glu Ile Glu Asn  
 20 25 30  
 Lys Leu Glu Pro Glu Arg Lys Ile Gln Leu Ala Lys Glu Leu Gly Leu  
 35 40 45  
 Gln Pro Arg Gln Val Ala Val Trp Phe Gln Asn Arg Arg Ala Arg Trp  
 50 55 60  
 Lys Thr Lys Gln Leu Glu Arg Asp Tyr Asp Ile Leu Lys Ser Arg Tyr  
 65 70 75 80  
 Glu Asn Leu Arg Val Asp Tyr Asp Ser Leu Leu Lys Glu Lys Asp Lys  
 85 90 95  
 Leu Arg Ala Glu Val Thr Phe Leu Thr Asp Lys Leu His Asp Ser Asp  
 100 105 110  
 His Glu Ala Leu Thr Lys Asp Ser Glu Ser Ala Asp Lys Lys Val Tyr

115 120 125  
 Pro Gln Pro Ala Ser His Ser Asp Cys Val Gly Glu Pro Glu Arg Ser  
 130 135 140  
 Thr Ala Ala Lys Asp Thr Pro Pro Gly Cys Lys His Glu Asp Leu Leu  
 145 150 155 160  
 Ser Ser Gly Thr Asp Ser Ser Gly Val Leu Asp Glu Asp Ser Pro His  
 165 170 175  
 His Val Asp Cys Gly  
 180

<210> 2230  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

<400> 2230  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His  
 20 25 30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
 50 55 60  
 Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Val Ile Lys  
 65 70 75 80  
 Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu  
 85 90 95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr  
 100 105

<210> 2231  
 <211> 125  
 <212> PRT  
 <213> Pinus radiata

<400> 2231  
 Lys Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Gln Phe Leu Met  
 1 5 10 15  
 Gly Leu Arg Lys Tyr Gly Lys Gly Asp Trp Arg Ser Ile Ser Arg Asn  
 20 25 30  
 Phe Val Val Ser Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys  
 35 40 45  
 Tyr Tyr Ile Arg Leu Gly Ser Asp Asn Lys Asn Lys Arg Arg Ser Ser  
 50 55 60  
 Ile His Asp Ile Thr Thr Val His Gly Thr Asp Arg Met Pro Ser Pro  
 65 70 75 80  
 Leu Leu His Val Ser Asn Arg Gln Thr Asn Ser Pro Ser Thr Gln Ala  
 85 90 95  
 Glu Met Asn His Ser Pro Cys Leu Asp Ile Ser Ile Ser Asp Phe Thr  
 100 105 110  
 Arg Thr Ser Asn Lys Leu Phe Gly Thr Ser Asn Arg Trp  
 115 120 125

<210> 2232  
 <211> 150  
 <212> PRT  
 <213> Pinus radiata

<400> 2232  
 Met Thr Arg Lys Cys Ser His Cys Gly Asn Asn Gly His Asn Ser Arg

```

1           5           10           15
Thr Cys Pro Asn Arg Gly Gly Val Lys Leu Phe Gly Val Arg Leu Thr
      20      25      30
Asp Gly Pro Ile Arg Lys Ser Ala Ser Met Gly Asn Leu Met Met Met
      35      40      45
Ser Asn Pro Ser Ser Pro Ala Asp Pro Ser Glu Pro Ala Ser Ala Ala
      50      55      60
Ala Ala Ala Ala Ala Ala Ala Ser Gly Tyr Leu Ser Asp Gly Leu
65      70      75      80
Val Glu Ala Ser Thr Ser Ser Asn Ser Arg Glu Arg Lys Lys Gly Val
      85      90      95
Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Leu Gly Leu Gln Lys
      100     105     110
Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asn Phe Val Ile Thr
      115     120     125
Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Phe Ile Arg
      130     135     140
Gln Ser Asn Met Thr Arg
145      150

```

<210> 2233  
 <211> 102  
 <212> PRT  
 <213> Pinus radiata

```

<400> 2233
Met Lys Met Ser Leu Pro Ser Asn Val Leu Thr Leu Ser Ala Asp Ser
1           5           10           15
Asn Ser Asn Ser Asn Ser Ile Ser Ser Ser Gly Asp Glu Leu Ala Ala
      20      25      30
Lys Val Arg Lys Pro Tyr Thr Ile Thr Lys Gln Arg Glu Arg Trp Ser
      35      40      45
Glu Asp Glu His Leu Lys Phe Leu Glu Ala Leu Lys Met Tyr Gly Arg
      50      55      60
Ala Trp Arg Arg Ile Glu Glu His Ile Gly Thr Lys Thr Ala Val Gln
65      70      75      80
Ile Arg Ser His Ala Gln Lys Phe Phe Ser Lys Leu Val Arg Gly Ser
      85      90      95
Ser Asn Lys Gly Val Ser
      100

```

<210> 2234  
 <211> 85  
 <212> PRT  
 <213> Pinus radiata

```

<400> 2234
Gly Ile Asp Met Asn Arg Gly Pro Ala Thr Asn Glu Ser Glu Tyr Ser
1           5           10           15
Ser Val Phe Gln Ala Asp Ala Leu Arg Thr Ile Asp Thr Gly Ser Val
      20      25      30
Val Val Lys Arg Glu Arg Glu Arg Thr Phe Glu Leu Glu Ala Glu Arg
      35      40      45
Asp Arg Thr Cys Asp Val Ser Ser Arg Thr Ser Asp Glu Glu Glu Ile
      50      55      60
Gly Ser Thr Arg Lys Lys Leu Arg Leu Ser Lys Glu Gln Ser Ala Leu
65      70      75      80
Leu Glu Glu Ser Phe
      85

```

<210> 2235

<211> 115  
 <212> PRT  
 <213> Pinus radiata

<400> 2235  
 Asn Leu Glu Ser Leu Thr Leu Lys Glu Leu Gln Gln Leu Glu Lys Gln  
 1 5 10 15  
 Leu Gly Arg Ala Ile Lys Lys Ile Tyr Asn Lys Lys Met Lys Ile Ile  
 20 25 30  
 Ser Gln Cys Cys Lys Ser Leu Ser Glu Lys Val Arg Ser Leu Glu Glu  
 35 40 45  
 Glu Asn Ser Glu Leu Leu Thr Lys Leu Ile Pro Arg Ala Asp Ser Ser  
 50 55 60  
 Thr Ser Gly Ala Ala Leu Phe Val Asp Thr Ser Met Pro Lys Ser His  
 65 70 75 80  
 Ser Ala Thr Glu Ala Trp Arg Gln Leu Leu Gln Arg Val Leu Val Thr  
 85 90 95  
 Ala Ala Lys Met Ala Thr Thr Pro Pro Ala Arg His Ser Asn Ser Arg  
 100 105 110  
 Pro Asn His  
 115

<210> 2236  
 <211> 88  
 <212> PRT  
 <213> Pinus radiata

<400> 2236  
 Gly Lys Ala Thr Ser Gly Ser Ala Asn Glu Ala Met Ser Gln Ser Gly  
 1 5 10 15  
 Asp Ser Gly Ser Asp Gly Ser Ser Glu Gly Ser Glu Glu Tyr Asn Thr  
 20 25 30  
 Gln Thr Glu Ser Gln Val Ala Arg Lys Arg Ser Phe Asp Gln Met Ile  
 35 40 45  
 Val Asp Gly Ala Asn Ala Gln Ser Thr Asn Ile Gln Ser Tyr Asn Ser  
 50 55 60  
 Gln Ala Gly Glu Pro Tyr Val Thr Ser Gly Gly His Ala Met Gly Asn  
 65 70 75 80  
 Pro Ile Ser Gln Ala Val Ala Ala  
 85

<210> 2237  
 <211> 66  
 <212> PRT  
 <213> Pinus radiata

<400> 2237  
 Gln Leu Lys Trp Lys Glu Arg Ile Leu Thr Glu Glu Asn Leu Phe Leu  
 1 5 10 15  
 Arg Lys Lys Cys Gly Asp Glu His Val Asp Cys Ser Ala Phe Arg Thr  
 20 25 30  
 Pro Pro Ala Gln Leu Arg Ser Ile Gln Asn Ile Asp Val Glu Thr Gln  
 35 40 45  
 Leu Val Ile Arg Pro Pro Thr Val Gln Gln His Pro Asp Val Asp Ser  
 50 55 60  
 Pro Arg  
 65

<210> 2238  
 <211> 176  
 <212> PRT



&lt;213&gt; Pinus radiata

&lt;400&gt; 2238

```

Met Gly Arg Thr Pro Cys Cys Leu Lys Val Gly Leu Asn Arg Gly Pro
 1          5          10          15
Trp Thr Pro Glu Glu Asp Leu Cys Leu Ser Asn Tyr Ile Glu Ala His
          20          25          30
Gly Glu Gly Gly Trp Arg Thr Leu Pro Lys Lys Ala Gly Leu Leu Arg
          35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu Arg Pro Asp
          50          55          60
Val Lys His Gly His Ile Leu Pro Glu Glu Glu Asp Leu Ile Leu Arg
          65          70          75          80
Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Met
          85          90          95
Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Thr His Leu
          100          105          110
Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His Lys Pro
          115          120          125
Leu Ser Glu Ser Glu Asp Ile Cys Ser Ser Pro Gly Asn Ser Glu Val
          130          135          140
Ser Arg Lys Ser Gln Arg Glu Asn Asn Ala Glu Ile Pro Arg Lys Val
          145          150          155          160
Ala Asp Gly Ala Val Asp Ile Gln Asp Lys Glu Glu Asp Ile Thr Glu
          165          170          175

```

&lt;210&gt; 2239

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2239

```

Met Gly Arg Gly Lys Ile Glu Ile Lys Met Ile Glu Asn Thr Ala Asn
 1          5          10          15
Arg Gln Val Thr Phe Ser Lys Arg Lys Gly Gly Leu Leu Lys Lys Ala
          20          25          30
His Glu Leu Ser Val Leu Cys Asn Ala Glu Ile Ala Leu Ile Val Phe
          35          40          45
Ser Asn Thr Gly Lys Leu His Asp Trp Ser Ser Ser Ser Met Lys Lys
          50          55          60
Val Met Glu Lys Tyr Gln Lys Ser Asp Gln Gly Leu Gly Leu Met Asp
          65          70          75          80
Tyr Gln Gln Gln Gln Leu Leu Cys Glu Met Lys Arg Ile Thr Lys Glu
          85          90          95
Asn Glu Ser Leu Arg Ala Arg Leu Arg
          100          105

```

&lt;210&gt; 2240

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2240

```

Met Ser Asn Gly Arg Leu Cys Glu Asp Leu Asp Arg Ile Lys Gly Pro
 1          5          10          15
Trp Ser Pro Glu Glu Asp Ala Ser Leu Gln Arg Leu Val Gln Lys Tyr
          20          25          30
Gly Pro Arg Asn Trp Thr Leu Ile Ser Lys Gly Ile Pro Gly Arg Ser
          35          40          45
Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser Pro Gln Val
          50          55          60

```

Glu His Arg Pro Phe Thr Pro Ser Glu Asp Ala Ala Ile Leu  
 65 70 75

<210> 2241  
 <211> 67  
 <212> PRT  
 <213> Pinus radiata

<400> 2241  
 Met Gly Arg Ala Leu Gly Arg Thr Glu Ile Lys Arg Ile Glu Asn Glu  
 1 5 10 15  
 Val Ser Arg Asn Val Ser Phe Arg Lys Arg Arg Arg Gly Leu Leu Lys  
 20 25 30  
 Lys Ala Ala Glu Leu Ser Ile Leu Cys Asp Ala Thr Val Gly Val Val  
 35 40 45  
 Val Phe Ser Pro Ala Gly Lys Leu Ser Glu Tyr Ala Ser Thr Ser Glu  
 50 55 60  
 Gln Met Asp  
 65

<210> 2242  
 <211> 131  
 <212> PRT  
 <213> Pinus radiata

<400> 2242  
 Ile Arg Asn Pro Thr Asn Arg His Ser Ser Phe Tyr Lys Arg Lys Gly  
 1 5 10 15  
 Gly Leu Leu Lys Lys Ala Phe Glu Leu Ala Val Leu Cys Asp Ala Glu  
 20 25 30  
 Val Ala Leu Ile Ile Phe Ser Glu Thr Gly Arg Ile Tyr Glu Phe Ala  
 35 40 45  
 Ser His Asp Asp Val Thr Thr Val Leu Ala Lys Tyr Arg Ile Gln Thr  
 50 55 60  
 Lys Thr Ala Gly Asn Ala Met Pro Ser Ser Leu Gln Lys Thr Glu Phe  
 65 70 75 80  
 Asp Gln Leu Gln Val Arg Met Leu Gln Glu Lys Ile Asp Asn Leu Glu  
 85 90 95  
 Lys Thr Lys Lys His Met Val Gly Asp Asn Leu Glu Ser Leu Thr Trp  
 100 105 110  
 Lys Glu Leu Gln Gln Val Glu Lys Lys Leu Ser Lys Ala Thr Lys Ile  
 115 120 125  
 Ile Val Ala  
 130

<210> 2243  
 <211> 29  
 <212> PRT  
 <213> Pinus radiata

<400> 2243  
 Gln Pro Val Ala Pro Glu Ser Ile Val Pro Pro His Gln Pro Pro His  
 1 5 10 15  
 Asn Gln Thr Pro Asn Gln Tyr Met Gln Gly Trp Trp Val  
 20 25

<210> 2244  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

&lt;400&gt; 2244

```

Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1           5           10           15
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
           20           25           30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
           35           40           45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50           55           60
Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Ile Ile Lys
65           70           75           80
Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
           85           90           95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr
           100           105

```

&lt;210&gt; 2245

&lt;211&gt; 168

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2245

```

Thr Ala Glu Glu Asp Arg Lys Leu Val Asn Phe Ile Thr Leu His Gly
 1           5           10           15
His Gly Cys Trp Arg Glu Val Pro Lys Leu Ala Gly Leu Leu Arg Cys
           20           25           30
Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Leu
           35           40           45
Lys Arg Gly Leu Leu Ser Glu Ser Glu Glu Lys Leu Ile Ile Asp Leu
 50           55           60
His Ala Ala Ile Gly Asn Arg Trp Ser Arg Ile Ala Ala Gln Leu Pro
65           70           75           80
Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr Arg Ile Lys
           85           90           95
Lys Lys Leu Arg Gln Met Gly Ile Asp Pro Val Thr His Lys Pro Leu
           100           105           110
Thr Gln Met Gln Met Gln Ser Thr Pro Ala Gln Thr Leu Leu Leu Gln
           115           120           125
Glu Asn Asp Thr Glu Gln Gln Gln Glu Gln His Asn Glu Pro Asp
           130           135           140
Pro Asp Gln Asn Gln Ser Ser Asn Gly Thr Val Glu Thr Leu Val Ser
145           150           155           160
Arg Ala Arg Glu Pro His Asp His
           165

```

&lt;210&gt; 2246

&lt;211&gt; 164

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2246

```

Ser Asp Gly Thr Thr Met Ser Thr Tyr Glu Arg Lys Ala Ser Leu
 1           5           10           15
Arg Glu Phe Tyr Ala Val Ile Tyr Pro Ser Leu Leu Gln Leu Glu Gly
           20           25           30
Gly Ile Thr Glu Met Glu Asp Asn Lys Gln Lys Leu Ile Cys Lys Glu
           35           40           45
Arg Tyr Lys Lys Arg Val Asp Glu Glu Arg Arg His Leu Ser Glu Leu
 50           55           60
Asp Leu Glu Arg Glu Lys Glu Cys Gly Ile Cys Met Glu Thr Gln Thr
65           70           75           80

```

Lys Val Val Leu Pro Asn Cys Ser His Ala Met Cys Leu Asn Cys Tyr  
 85 90 95  
 Arg Glu Trp His Ala Arg Ser Glu Ser Cys Pro Phe Cys Arg Asp Ser  
 100 105 110  
 Leu Lys Arg Val Asn Ser Thr Asp Leu Trp Ile Phe Thr Ser Asn Glu  
 115 120 125  
 Glu Val Val Asp Met Glu Thr Leu Gly Arg Glu Asn Leu Lys Arg Leu  
 130 135 140  
 Phe Asn Tyr Ile Asp Lys Leu Pro Leu Ile Val Pro Glu Ser Leu Phe  
 145 150 155 160  
 Tyr Val Tyr Asp

<210> 2247

<211> 414

<212> PRT

<213> Eucalyptus grandis

<400> 2247

Met Gly Arg His Ser Cys Cys Tyr Lys Gln Lys Leu Arg Lys Gly Leu  
 1 5 10 15  
 Trp Ser Pro Glu Glu Asp Glu Lys Leu Leu Arg His Ile Ser Gln Tyr  
 20 25 30  
 Gly His Gly Cys Trp Ser Ser Val Pro Lys Gln Ala Gly Leu Gln Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
 50 55 60  
 Leu Lys Arg Gly Ala Phe Ser Gln Asp Glu Glu Asp Leu Ile Ile Glu  
 65 70 75 80  
 Leu His Ala Ala Leu Gly Asn Lys Trp Ser Gln Ile Ala Ala Asn Leu  
 85 90 95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Leu Trp Asn Ser Cys Leu  
 100 105 110  
 Lys Lys Lys Leu Arg Gln Arg Gly Ile Asp Pro Val Ser His Arg Pro  
 115 120 125  
 Leu Ser Glu Val Glu Asn Ser Asp Asp Lys Asp Ala Thr Ser Gly Gln  
 130 135 140  
 Thr Gln Asp Lys Val Ser Arg Gly Ser Val Glu Leu Leu Ser Gln Leu  
 145 150 155 160  
 Asn Pro Gln Phe Ser Ser Ser Thr Thr Ala Arg Ser Ser Lys Asn Ser  
 165 170 175  
 Asn Leu Met Ala Pro Thr Leu Ser Lys Asp Thr Val Ala Asp Gly Phe  
 180 185 190  
 Val Ser Asn His Gln Glu Asn Ser Met Met Asn Ser Cys Ile Ser Asp  
 195 200 205  
 Phe Val Asp Asn Phe Ser Leu Gln Gln Leu Asn Tyr Ser Ser Ser Asp  
 210 215 220  
 Ser Arg Phe Ser Asn Leu Cys Phe Thr Gln Thr Gly Arg Ala His Gly  
 225 230 235 240  
 Asn Thr Ile Phe Ser Asp Phe Asn Ser Asn Val Ile Ser Ala Ile Ser  
 245 250 255  
 Pro Pro Ser Ser Asn Ser Leu Phe Pro Thr Ala Ser Met Gly Phe Asn  
 260 265 270  
 Phe Lys Pro Ser Asn Ala Val Pro Ser Ala Asn Ser Thr Ser Ser Ala  
 275 280 285  
 Ser Thr Gly Thr Ala Asp Phe His Asn Ser Gly Ser Tyr Phe Gly Asn  
 290 295 300  
 Ser Leu Val Ser Trp Gly Leu Leu Ala Asp Cys Gly Ser Pro Asp Lys  
 305 310 315 320  
 Glu Gly Ser Thr Ser Ile His Pro Leu Glu Val His Gln Pro Gly Asp  
 325 330 335

Phe Lys Trp Ala Ala Glu Tyr Leu Gln Asn Pro Leu Phe Met Ala Ala  
 340 345 350  
 Ala Leu Gln Asn Gln Ala Gln Glu Gln Ser Asn Leu Tyr Asn Gln Ile  
 355 360 365  
 Lys Pro Glu Thr Gln Phe Pro Pro Asp His Ser Thr Thr Ser Met Trp  
 370 375 380  
 Asp His Leu Gln Gly His Glu Ser Leu Asp Asn Ser Leu Asn Thr Cys  
 385 390 395 400  
 Gly Lys Asp Ile Gln Arg Leu Thr Ala Leu Leu Gly His Asn  
 405 410

&lt;210&gt; 2248

&lt;211&gt; 205

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2248

Met Arg Tyr Pro Ala Pro Ala Pro Ala Ser Arg Gly Lys Ser Thr Ser  
 1 5 10 15  
 Thr Ala Thr Pro Cys Cys Ser Lys Val Gly Ile Lys Arg Gly Pro Trp  
 20 25 30  
 Thr Pro Glu Glu Asp Glu Val Leu Ala Ser Tyr Val Arg Arg Glu Gly  
 35 40 45  
 Glu Gly Arg Trp Arg Thr Leu Pro Lys Arg Ala Gly Leu Gln Arg Cys  
 50 55 60  
 Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu Arg Pro Ser Val  
 65 70 75 80  
 Lys Arg Gly Gln Ile Ala Pro Asp Glu Glu Asp Leu Ile Leu Arg Leu  
 85 90 95  
 His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Ile Pro  
 100 105 110  
 Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Leu Ser  
 115 120 125  
 Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His Lys Pro Leu  
 130 135 140  
 Leu Asn His Asn Pro Ser Ser Leu Ala Ala His Leu Gln Asp Thr  
 145 150 155 160  
 Tyr Asn Ala Ser Thr Phe Thr Pro Lys Ala Thr Tyr Pro Asn Pro Thr  
 165 170 175  
 Val Pro Val Glu Glu Thr Gly Asp Glu Asn Asp Leu Lys Val Gly Arg  
 180 185 190  
 Gln Pro Ala Gly Ser Ala Ser Lys Arg Gly Arg Cys Gln  
 195 200 205

&lt;210&gt; 2249

&lt;211&gt; 195

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2249

Met Asp Lys Lys Pro Asp Asp Asp Ser Gly Lys Ser Gln Asp Val Glu  
 1 5 10 15  
 Val Arg Lys Gly Pro Trp Thr Met Glu Glu Asp Leu Ile Leu Ile Asn  
 20 25 30  
 Tyr Ile Ala Asn His Gly Glu Gly Ser Trp Asn Ser Leu Ala Lys Ala  
 35 40 45  
 Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn  
 50 55 60  
 Tyr Leu Arg Pro Asp Val Arg Arg Gly Asn Ile Thr Thr Glu Glu Gln  
 65 70 75 80  
 Leu Leu Ile Met Glu Leu His Ala Lys Trp Gly Asn Arg Trp Ser Lys

```

      85              90              95
Ile Ala Lys His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Phe
      100              105              110
Trp Arg Thr Arg Ile Gln Lys His Ile Lys Gln Ala Glu Ala Phe Ser
      115              120              125
Gly Gln Ser Ser Glu Met Ser Asp Gln Ala Ser Thr Ser His Met Ser
      130              135              140
Ser Met Pro Glu Pro Met Glu Thr Tyr Asp Ser Pro Pro Ser Phe Gln
      145              150              155              160
Gly Asn Asn Asn Met Glu Pro Leu Pro Val Asn Leu Ser Val Glu Ser
      165              170              175
Asn Glu Ala Tyr Trp Ser Met Asp Asp Leu Trp Ser Met Gln Leu Leu
      180              185              190
Asn Gly Asp
      195

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<210> 2250
<211> 208
<212> PRT
<213> Eucalyptus grandis

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      <400> 2250
Met Asp Lys Lys Pro Cys Tyr Arg Thr Gln Asp Pro Gln Val Arg Lys
  1              5              10              15
Gly Pro Trp Thr Leu Glu Glu Asp Leu Ile Leu Met Asp Tyr Ile Ala
      20              25              30
Asn His Gly Glu Gly Val Trp Asn Ser Leu Ala Lys Ala Ala Gly Leu
      35              40              45
Gln Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg
      50              55              60
Pro Asp Val Arg Arg Gly Asn Ile Thr Pro Glu Glu Gln Leu Leu Ile
      65              70              75              80
Ile His Leu Gln Ser Met Trp Gly Asn Arg Trp Ser Glu Ile Ala Lys
      85              90              95
His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg Thr
      100              105              110
Lys Ile Gln Lys His Ile Ile Lys Gln Ser Glu Thr Glu Ile Asn Asp
      115              120              125
Leu Thr Ile Pro Pro Ser Ser Ala Asn Ala Cys Thr Asp His Arg Gly
      130              135              140
Val Ser Ala Ala Asn Thr Ile Glu Ile Ala Cys Ser Pro Pro Ser Asp
      145              150              155              160
Gln Gly Gly Ser Gly Glu Thr Met Leu Ser Ala Leu Pro Pro Ala Gln
      165              170              175
Glu Pro Asn Asp Ser Ala Cys Trp Ser Val Glu Asp Leu Trp Pro Ile
      180              185              190
Gln Ser Leu Ile Ser Gly Met Gly Asp Asp Ala Gln Tyr Tyr Ser Val
      195              200              205

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<210> 2251
<211> 147
<212> PRT
<213> Eucalyptus grandis

```

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      <400> 2251
Met Asn Ser Thr Thr Thr Gln Phe Val Ser Ser Arg Arg Met Gly Met
  1              5              10              15
Tyr Asp Pro Ile His Gln Ile Gly Met Trp Asp Glu Asn Phe Lys Gln
      20              25              30
Asn Gly Asn Pro Asn Ala Pro Pro Ala Leu Ile Ile Pro Met His Ala
      35              40              45

```

Asn Leu Asp Asn Gln Ser Glu Asp Thr Ser His Gly Ser Gln Asp Thr  
 50 55 60  
 Ala Gly Lys Tyr Glu Gln Glu Thr Ser Lys Pro Tyr Asp Lys Val Gln  
 65 70 75 80  
 Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser Arg Leu Arg  
 85 90 95  
 Lys Lys Ala Tyr Val Gln Gln Leu Glu Ala Ser Arg Leu Lys Leu Met  
 100 105 110  
 Gln Leu Glu Gln Glu Val Asp Arg Ala Arg Gln Gln Gly Val Tyr Met  
 115 120 125  
 Ala Ser Gly Val Asp Ser Ala Tyr Pro Gly Tyr Gly Gly Cys Leu Asn  
 130 135 140  
 Ser Gly Ile  
 145

<210> 2252  
 <211> 43  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2252  
 Met Met Ala Val Thr Ser Ala Cys Lys Asp Lys Met Gly Ile Asp Asn  
 1 5 10 15  
 Gly Lys Tyr Val Arg Tyr Thr Pro Glu Gln Val Glu Ala Leu Glu Arg  
 20 25 30  
 Leu Tyr His Glu Cys Pro Lys Pro Ser Ser Leu  
 35 40

<210> 2253  
 <211> 54  
 <212> PRT  
 <213> Pinus radiata

<400> 2253  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His  
 20 25 30  
 Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Cys Leu Pro  
 35 40 45  
 Ala Leu Cys Phe Leu Asn  
 50

<210> 2254  
 <211> 66  
 <212> PRT  
 <213> Pinus radiata

<400> 2254  
 Met Gly Arg Ala Pro Cys Cys Glu Lys Val Gly Leu Lys Lys Gly Pro  
 1 5 10 15  
 Trp Thr Pro Glu Glu Asp Gln Lys Leu Val Thr Tyr Ile Gln Glu His  
 20 25 30  
 Gly His Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly Asp Tyr Glu  
 35 40 45  
 Phe Ile Phe Ser Ser Arg Thr Cys Lys Lys Phe Ser Val Phe Leu Phe  
 50 55 60  
 Phe Gly  
 65

<210> 2255

<211> 67  
 <212> PRT  
 <213> Pinus radiata

<400> 2255  
 Met Gly Arg Ser Pro Cys Cys Ala Lys Glu Gly Leu Asn Arg Gly Ala  
   1                  5                  10                  15  
 Trp Thr Lys Thr Glu Asp Ile Ile Leu Ser Glu Tyr Ile Arg Ile His  
                   20                  25                  30  
 Gly Asp Gly Gly Trp Arg Ser Leu Pro Lys Lys Ala Gly Leu Lys Arg  
                   35                  40                  45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Asp  
                   50                  55                  60  
 Ile Lys Arg  
 65

<210> 2256  
 <211> 226  
 <212> PRT  
 <213> Pinus radiata

<400> 2256  
 Met Gly Arg Ala Pro Cys Cys Ser Asn Asp Asp Arg Asn Lys Gly Ala  
   1                  5                  10                  15  
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Gln Tyr Ile Lys Val His  
                   20                  25                  30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
                   35                  40                  45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
                   50                  55                  60  
 Leu Lys Arg Gly Phe Phe Ser Glu Asp Glu Asp Asp Leu Ile Leu Lys  
   65                  70                  75                  80  
 Leu His Ala Leu Leu Gly Asn Asn Arg Trp Ser Leu Ile Ala Gly Arg  
                   85                  90                  95  
 Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Ser His  
                   100                  105                  110  
 Leu Lys Arg Lys Leu Ile Ser Met Gly Ile Asp Pro Leu Thr His Arg  
                   115                  120                  125  
 Pro Phe Gln Lys Thr Ser His His His Pro Ser Pro Pro Gln Asn Val  
                   130                  135                  140  
 Arg Glu Ala Glu Thr Thr Pro Ser Ile Gly Ile Val Gln Asp Phe Phe  
   145                  150                  155                  160  
 Arg Cys Pro Ser Glu Leu Ser Thr Lys Ser Glu Gln Ile Ser Asp Ala  
                   165                  170                  175  
 Ala Ser Gly Leu Ala Gln Asp Glu Gln Pro His Pro Asn Leu Asn Leu  
                   180                  185                  190  
 Asn Leu Glu Leu Ser Ile Ala Arg Ser Ser Val His Arg Val Ala Glu  
                   195                  200                  205  
 Lys Glu Asp Val Val Asn Ser Gln Gln Gly Glu Ser Asn Leu Ser Glu  
                   210                  215                  220  
 Gly Lys  
 225

<210> 2257  
 <211> 101  
 <212> PRT  
 <213> Pinus radiata

<400> 2257  
 Met Gly Arg Ala Pro Cys Cys Ser Asn Gly Asp Arg Asn Lys Gly Ala  
   1                  5                  10                  15



Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Gln Tyr Ile Lys Val His  
                           20                          25                          30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Asn Ala Ala Gly Leu Leu Arg  
                           35                          40                          45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Cys Pro Asp  
                           50                          55                          60  
 Leu Lys Arg Gly Phe Phe Ser Glu Asp Glu Asp Asp Leu Ile Leu Lys  
 65                          70                          75                          80  
 Leu His Ala Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu  
                           85                          90                          95  
 Pro Gly Arg Thr Asp  
                           100

&lt;210&gt; 2258

&lt;211&gt; 412

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2258

Met Gly Arg Thr Pro Cys Cys Glu Lys Asn Ile Gly Leu Lys Lys Gly  
 1                          5                          10                          15  
 Pro Trp Thr Pro Glu Glu Asp Gln Lys Leu Ile Asp Tyr Ile Gln Ser  
                           20                          25                          30  
 His Gly His Gly Ser Trp Arg Ala Leu Pro Lys Arg Ala Gly Leu Leu  
                           35                          40                          45  
 Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro  
                           50                          55                          60  
 Asp Ile Lys Arg Gly Gln Phe Ser Phe Glu Glu Gln Thr Ile Ile  
 65                          70                          75                          80  
 Glu Leu His Ala Val Leu Gly Asn Lys Trp Ser Thr Ile Ala Gly His  
                           85                          90                          95  
 Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His  
                           100                          105                          110  
 Leu Lys Lys Arg Leu Leu Gln Met Gly Ile Asp Pro Val Thr His Arg  
                           115                          120                          125  
 Pro Arg Thr Asp Leu Leu Ala Phe Ser Asn Ile Gln Ser Ser Ile Phe  
                           130                          135                          140  
 Asn Thr Pro Gly Phe Gly His Met Ala Gln Trp Glu Ser Ala Arg Leu  
 145                          150                          155                          160  
 Glu Ala Glu Ala Arg Leu Thr Gly Glu Tyr Leu Arg Gln Ala Leu Phe  
                           165                          170                          175  
 Met Ala Gly Asn Gly Ser Ala Thr Ala Asp Leu Leu Met Arg Pro Cys  
                           180                          185                          190  
 Lys Ser Glu Phe Gly Asn Asp Gln Phe Asn Leu Thr Lys Asn Met Gly  
                           195                          200                          205  
 Asn Pro Pro Trp Ile Gln Gln Pro Gly Met Ala Leu Asp Tyr Lys Gly  
                           210                          215                          220  
 Ala Val Pro Gln Ser Leu Glu Gln Phe Leu Gln Thr Asn Val Cys Ser  
 225                          230                          235                          240  
 Ala Ser Asp Ile Asn Gly Gly Gly Cys Leu Ser His Glu Gly Gly Phe  
                           245                          250                          255  
 Asn Ile Thr Lys Phe Ala Ser Pro Cys Ser Thr Leu Asp Gly Ile Gln  
                           260                          265                          270  
 Ile Lys Thr Glu Pro Gln Ser Leu Cys Gly Pro Gln Val Val Lys Asn  
                           275                          280                          285  
 Asp Ser Gln Phe Leu His Ser Glu Gly Asp Leu Arg Lys Gln Ala Met  
                           290                          295                          300  
 Leu Asp Met Asn Val Gly Cys Asn Val Leu Ile Asn Met Asn Ala Glu  
 305                          310                          315                          320  
 Ser Lys Val Ser Phe Gly His Asn Gly Ile Ile Thr Asp Gln Glu Tyr  
                           325                          330                          335

```

Asn Asn Leu Gly Gln Ile Asp Asn Asn Asn His Leu Ser His Ala Ala
    340          345          350
Thr Thr Leu Trp Pro Val Glu Gly Gln Leu Gln Ala Ile Ala Ser Ala
    355          360          365
Ser Met Pro Gly Leu Ile Ser Ser Thr Ser Cys Thr Ser Asn Asn Ile
    370          375          380
Tyr Ser Gln Pro Gly Leu Ile Pro Leu Leu Asn Ser Thr Thr Ser Ser
    385          390          395          400
Met Gly Asp Thr Asn Ser Tyr Arg Glu Ala Gln Pro
          405          410

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&lt;210&gt; 2259

&lt;211&gt; 391

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2259

```

Met Gly Arg Thr Pro Cys Cys Leu Lys Val Gly Leu Asn Arg Gly Pro
  1          5          10          15
Trp Thr Pro Glu Asp Leu Cys Leu Ser Asn Tyr Ile Glu Ala His
    20          25          30
Gly Glu Gly Gly Trp Arg Thr Leu Pro Lys Lys Ala Gly Leu Leu Arg
    35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu Arg Pro Asp
    50          55          60
Val Lys His Gly His Ile Leu Pro Glu Glu Glu Asp Leu Ile Leu Arg
    65          70          75          80
Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Met
    85          90          95
Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Thr His Leu
    100          105          110
Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His Lys Pro
    115          120          125
Leu Ser Glu Ser Glu Asp Ile Cys Ser Ser Pro Gly Asn Ser Glu Val
    130          135          140
Ser Arg Lys Ser Gln Arg Glu Asn Asn Ala Glu Ile Pro Arg Lys Val
    145          150          155          160
Ala Asp Gly Ala Val Asp Ile Gln Asp Lys Glu Glu Asp Ile Thr Glu
    165          170          175
Asp Gln Thr Ser Ala Gln Leu Pro Glu Asn Gln Leu Leu Glu Thr Ser
    180          185          190
Asn Ser Gln Cys Pro Ser Val Ala Thr Asp Phe Val Pro Gln Ala Pro
    195          200          205
Ser Ile Pro Ser Thr Ala Tyr Ser Phe Gln Gln Ser Thr Thr Ser Ser
    210          215          220
Val Pro Gly Gly Val Ser Asp Ser Val Asp Val Asn His Asn Lys Gly
    225          230          235          240
Ser Lys Gln Val Pro Phe Pro Leu Ser Asn Thr Ala Cys Phe Asn Ser
    245          250          255
Ser Ala Gln Gly Val Ala Gly Asp Tyr Leu Asp Gln Tyr Leu Met Lys
    260          265          270
Asn Leu Val Thr Asn Ser Asn Asp Leu Ile Thr Ser Thr Val Arg Leu
    275          280          285
Ser Ser Ala Leu Gln Thr Ala Pro Phe Val Gly Gln Phe Asp Ser Asn
    290          295          300
His Val Phe Met Ser Gly Asn Ala Ser Leu Asn Glu Lys His Gln Met
    305          310          315          320
Pro Gln Asn Ser Gln Ala Leu Glu Met Asp Pro His His Ser Phe Ile
    325          330          335
Ala His Pro Ser Glu Glu Gly Thr Tyr Asp Lys Leu Asn His Thr Arg
    340          345          350

```

Cys Ala Ala Ser Asp Gln Val Thr Ser Phe Asn Tyr Pro Tyr Leu Ile  
                   355                  360                  365  
 Ser His Thr Val Thr Gly Ser Ala Leu Gly Asp Phe Asn Pro Asp Ile  
                   370                  375                  380  
 Phe Pro Pro Phe Val Glu Ser  
 385                  390

<210> 2260  
 <211> 144  
 <212> PRT  
 <213> Pinus radiata

<400> 2260  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
   1                  5                  10                  15  
 Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His  
                   20                  25                  30  
 Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
                   35                  40                  45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
   50                  55                  60  
 Leu Lys Arg Gly Ser Phe Thr Glu Glu Glu Asp Glu Leu Ile Ile Lys  
 65                  70                  75                  80  
 Leu His Ser Phe Val Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu  
                   85                  90                  95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile  
                   100                  105                  110  
 Lys Arg Lys Leu Leu Ser Lys Gly Leu Asp Pro Gln Thr His Arg Pro  
                   115                  120                  125  
 Leu Gly Gln Pro Asn Asn Thr Pro Val Thr Arg Pro Val Leu Glu His  
 130                  135                  140

<210> 2261  
 <211> 255  
 <212> PRT  
 <213> Pinus radiata

<400> 2261  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
   1                  5                  10                  15  
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His  
                   20                  25                  30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg  
                   35                  40                  45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
   50                  55                  60  
 Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Val Ile Lys  
 65                  70                  75                  80  
 Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu  
                   85                  90                  95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile  
                   100                  105                  110  
 Lys Arg Lys Leu Leu Asn Arg Gly Leu Asp Pro Gln Ser His Arg Pro  
                   115                  120                  125  
 Leu Gly Gln Pro His Asn Ser Asn Thr Thr Cys Pro Ser Leu Pro Ala  
   130                  135                  140  
 Leu Glu His Glu Ile Leu Val Phe Gln Arg Pro Arg Thr Pro Glu Ile  
 145                  150                  155                  160  
 Ala Asp Phe Phe Gln Tyr Glu Arg Ser Glu Ser Ser Pro Met Glu Pro  
                   165                  170                  175  
 Ala Thr Ser Lys Asp Ala Glu Glu His Pro Asp Leu Asn Leu Asp Leu

			180					185					190		
Cys	Ile	Ser	Leu	Pro	Val	His	Ser	Pro	Pro	Ala	Thr	Ser	Arg	Ala	Ser
			195					200					205		
Ser	Val	Asp	Gly	Thr	Val	Asp	Ser	Lys	Pro	Asn	Ser	Val	Ser	Cys	His
			210					215					220		
Met	Gly	Leu	Gln	Val	Asn	Tyr	Gly	Val	Gln	Cys	Glu	Asn	Arg	Tyr	Cys
225						230					235				240
Glu	Glu	Ser	Ala	Ser	Gly	Val	Ser	Ser	Phe	Tyr	Thr	Leu	Val	Leu	
				245						250					255

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<210> 2262
<211> 162
<212> PRT
<213> Pinus radiata
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[illegible]

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<210> 2263
<211> 193
<212> PRT
<213> Pinus radiata
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<400> 2263															
Met	Gly	Cys	Asn	Gln	Ser	Lys	Val	Glu	Ser	Glu	Glu	Glu	Val	Val	Lys
1				5					10					15	
Ser	Lys	Glu	Arg	Lys	Gln	Phe	Met	Lys	Glu	Ser	Val	Ala	Ala	Arg	Asn
			20					25					30		
Ala	Phe	Ala	Ala	Ala	His	Ser	Ala	Ser	Ile	Thr	Ser	Leu	Lys	Asn	Ile
		35					40					45			
Gly	Ala	Ala	Leu	Asn	Asp	Tyr	Gly	Gln	Gly	Glu	Ser	Lys	Glu	Ser	Leu
	50					55					60				
Ser	Gln	Gly	His	Leu	Pro	Val	Pro	His	Ile	Tyr	Gly	Asp	Pro	Leu	Pro
65					70					75				80	
Pro	Ala	Pro	Pro	Leu	Pro	Pro	Leu	Leu	Pro	Pro	Pro	Arg	Pro	Asp	Glu
				85					90					95	
His	Pro	Ala		Arg	Pro	Leu	Glu	Arg	Ser	Ala	Ser	Ala	Pro	Ala	Ile
			100						105					110	Ala
Leu	Gln	Gln	Gln	Ala	Glu	Glu	Asp	Arg	Asn	Pro	Glu	Ala	Asn	Ala	Gly
		115					120					125			

Ala Ser Ile Pro Glu Gly Glu Glu Asp Glu Val Glu Glu Glu Glu Asp  
 130 135 140  
 Glu His Leu Val Glu Val Ser His Ser Val Thr Ser Phe Asn Pro Pro  
 145 150 155 160  
 Pro Arg Pro Pro Pro Ser Ser Ser Glu Pro Pro Pro Pro Pro Leu Pro  
 165 170 175  
 Pro Leu Thr Asn Gln Trp Asp Phe Phe Asp Asp Asn Ser Tyr Phe Glu  
 180 185 190  
 Arg

<210> 2264  
 <211> 128  
 <212> PRT  
 <213> Pinus radiata

<400> 2264  
 Met Gly Arg Gly Lys Ile Glu Ile Lys Met Ile Glu Asn Ala Thr Asn  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Gly Gly Leu Lys Lys Lys Ala  
 20 25 30  
 Gln Glu Leu Ser Val Leu Cys Asn Ala Glu Val Ala Leu Ile Ile Phe  
 35 40 45  
 Ser Ser Thr Gly Lys Leu His Glu Trp Ser Ser Ser Ser Phe Phe  
 50 55 60  
 Met Leu Gln Lys Ser Met Lys Lys Ile Leu Glu Arg Tyr Gln Lys Ser  
 65 70 75 80  
 Glu Gln Gly Leu Gly Leu Met Asp Tyr Gln His Gln Gln Leu Leu Cys  
 85 90 95  
 Glu Met Arg Arg Ile Thr Lys Glu Asn Glu Ser Leu Gln Glu Arg Leu  
 100 105 110  
 Arg His Met Asn Gly Glu Glu Val Asn Ser Leu Lys Leu Pro Glu Leu  
 115 120 125

<210> 2265  
 <211> 181  
 <212> PRT  
 <213> Pinus radiata

<400> 2265  
 Met Gly Arg Gly Arg Val Glu Leu Lys Arg Ile Glu Asn Lys Ile Asn  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
 20 25 30  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe  
 35 40 45  
 Ser Ser Arg Gly Lys Leu Tyr Glu Phe Gly Ser Ala Gly Met Leu Lys  
 50 55 60  
 Thr Leu Glu Arg Tyr Gln Lys Cys Ser Tyr Val Leu Gln Asp Ala Thr  
 65 70 75 80  
 Val Ser Asp Arg Glu Ala Gln Asn Trp His Gln Glu Val Gly Lys Leu  
 85 90 95  
 Lys Ala Arg Val Glu Leu Leu Gln Arg Ser Gln Arg His Leu Leu Gly  
 100 105 110  
 Glu Asp Leu Gly Pro Leu Ser Ile Lys Glu Leu Gln Gln Leu Glu Arg  
 115 120 125  
 Gln Leu Glu Val Ala Leu Thr His Val Arg Ser Arg Lys Thr Gln Val  
 130 135 140  
 Met Leu Glu Met Met Asp Glu Leu Arg Arg Lys Glu Arg Ile Leu Gln  
 145 150 155 160  
 Glu Val Asn Lys Ser Leu Arg Lys Lys Leu Gln Glu Ala Glu Gly Gln

165  
 Ala Phe Asn Ala Met  
 180  
 <210> 2266  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata  
 <400> 2266  
 Met Asp Leu Met Glu Ser Phe Glu Ala Lys Gly Lys Gly Glu Lys Arg  
 1 5 10 15  
 Arg Thr Val Arg Gly Lys Thr Gln Leu Lys Arg Ile Glu Asn Gly Thr  
 20 25 30  
 Ser Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys  
 35 40 45  
 Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val  
 50 55 60  
 Phe Ser Pro Arg Gly Lys Arg Tyr Glu Phe Ala Asn Pro Ser Met Gln  
 65 70 75 80  
 Lys Met Leu Ala Arg Tyr Glu Asn Phe Ser Glu Gly Ser Lys Ala Thr  
 85 90 95  
 Ser Thr Ala Lys Glu Gln Asp Val Gln Gly Leu  
 100 105

<210> 2267  
 <211> 134  
 <212> PRT  
 <213> Pinus radiata

<400> 2267  
 Ala Arg Gly Lys Thr Gln Met Arg Lys Ile Glu Ser Ala Thr Ser Arg  
 1 5 10 15  
 Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Met Lys Lys Ala Tyr  
 20 25 30  
 Glu Leu Ser Val Leu Cys Asp Ala Gln Leu Gly Leu Ile Val Phe Ser  
 35 40 45  
 Pro Arg Gly Lys Val Tyr Glu Phe Ser Ser Thr Cys Met Gln Lys Met  
 50 55 60  
 Leu Ala Arg Tyr Glu Lys Cys Ser Glu Gly Ser Asp Thr Ser Thr Ser  
 65 70 75 80  
 Lys Glu Gln Asp Val Gln Cys Leu Lys Arg Glu Ser Ala Asn Met Glu  
 85 90 95  
 Glu Arg Ile Glu Ile Leu Glu Ser Met Gln Arg Lys Met Leu Gly Glu  
 100 105 110  
 Glu Leu Ala Ser Cys Ala Leu Lys Asp Leu Asn Gln Leu Glu Ser Gln  
 115 120 125  
 Val Glu Arg Gly Leu Arg  
 130

<210> 2268  
 <211> 138  
 <212> PRT  
 <213> Pinus radiata

<400> 2268  
 Met Gly Arg Gly Arg Val Gln Leu Arg Arg Ile Glu Asn Lys Ile Asn  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
 20 25 30  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe

35 40 45  
 Ser Thr Arg Gly Lys Leu Tyr Glu Phe Ala Ser Ser Ser Met Asn Lys  
 50 55 60  
 Thr Leu Glu Arg Tyr Glu Lys Cys Ser Tyr Ala Met Gln Asp Thr Thr  
 65 70 75 80  
 Gly Val Ser Asp Arg Glu Ala Gln Asn Trp His Gln Glu Val Thr Lys  
 85 90 95  
 Leu Lys Gly Lys Val Glu Leu Leu Gln Arg Ser Gln Arg His Leu Leu  
 100 105 110  
 Gly Glu Asp Leu Gly Pro Leu Asn Val Lys Glu Leu Gln Gln Leu Glu  
 115 120 125  
 Arg Gln Leu Glu Val Ala Leu Thr His Leu  
 130 135

&lt;210&gt; 2269

&lt;211&gt; 141

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2269

Met Gly Lys Lys Arg Val Glu Leu Lys Arg Ile Gln Asn Pro Ser Ser  
 1 5 10 15  
 Arg His Ala Thr Phe Ser Lys Arg Lys Asn Gly Leu Leu Lys Lys Ala  
 20 25 30  
 Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe  
 35 40 45  
 Ser Glu Thr Gly Lys Ile Tyr Glu Phe Ala Ser Asn Asn Asp Met Ala  
 50 55 60  
 Ala Ile Leu Gly Lys Tyr Arg Val His Glu Glu Gly Thr Glu Thr Ser  
 65 70 75 80  
 Ser Pro Thr Ser Leu Gln Asn Val Lys Tyr His Glu Ser Gly Leu Glu  
 85 90 95  
 Lys Leu Gln Glu Lys Leu Thr Ala Leu Gln Lys Lys Glu Lys Asn Leu  
 100 105 110  
 Ile Gly Glu Asp Leu Glu Val Leu Thr Met Lys Glu Leu Gln Arg Leu  
 115 120 125  
 Glu Lys Gln Leu Gln Ile Gly Ile Lys Arg Leu Val Ile  
 130 135 140

&lt;210&gt; 2270

&lt;211&gt; 135

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2270

Met Gly Lys Lys Lys Val Glu Val Lys Leu Ile Gln Asn Pro Thr Ser  
 1 5 10 15  
 Arg Gln Gly Cys Phe Tyr Asn Arg Lys Cys Gly Leu Leu Lys Lys Ala  
 20 25 30  
 Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe  
 35 40 45  
 Ser Gln Thr Gly Lys Ile Tyr Glu Phe Ala Ser His Asp Asp Val Asn  
 50 55 60  
 Ala Ile Leu Ala Lys Tyr Arg Ile Gln Thr Gly Thr Thr Thr Asn Ala  
 65 70 75 80  
 Met Pro Ser Ser Leu Gln Asn Thr Glu Pro Glu Thr Leu His Glu Glu  
 85 90 95  
 Thr Asn Met Leu Gly Lys Arg Lys Lys Val Glu Lys Leu His Glu Lys  
 100 105 110  
 Ile Asn Met Leu Glu Lys Arg Gly Lys Asn Met Val Gly Glu Asn Leu  
 115 120 125

Glu Ser Leu Thr Val Asn Glu  
130 135

<210> 2271  
<211> 118  
<212> PRT  
<213> Pinus radiata

<400> 2271  
Met Ala Arg Gly Lys Thr Gln Met Lys Lys Ile Glu Asn Val Thr Ser  
1 5 10 15  
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
20 25 30  
Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Ile Val Phe  
35 40 45  
Ser Pro Ser Gly Lys Leu Tyr Glu Phe Ser Arg Pro Cys Met Gly Lys  
50 55 60  
Leu Leu Glu Lys Tyr Glu Lys Asn Ser Arg Glu Ser Gly Ile Asn Asn  
65 70 75 80  
Ala Ala Lys Glu Lys Asp Thr Gln His Ser Lys Arg Glu Ile Ala Asn  
85 90 95  
Met Glu Glu Lys Ile Arg Ile Leu Glu Ser Thr Glu Arg Lys Met Leu  
100 105 110  
Gly Gln Asn Leu Ala Ser  
115

<210> 2272  
<211> 147  
<212> PRT  
<213> Pinus radiata

<400> 2272  
Met Asp Ser Phe Glu Ala Lys Gly Lys Gly Glu Lys Arg Arg Thr Val  
1 5 10 15  
Arg Gly Lys Thr Gln Met Lys Arg Ile Glu Asn Ala Thr Ser Arg Gln  
20 25 30  
Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala Tyr Glu  
35 40 45  
Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Met Val Phe Ser Pro  
50 55 60  
Arg Gly Lys Leu Tyr Glu Phe Ala Asn Pro Ser Met Gln Lys Met Leu  
65 70 75 80  
Glu Arg Tyr Glu Lys Cys Ser Glu Gly Ser Lys Thr Thr Ser Ile Ala  
85 90 95  
Lys Glu Glu Asp Pro Lys Ala Leu Lys Arg Glu Ile Ala Asn Met Glu  
100 105 110  
Glu Arg Ile Glu Ile Leu Glu Arg Thr Gln Arg Lys Met Leu Gly Glu  
115 120 125  
Glu Leu Ala Ser Cys Ala Leu Lys Asp Leu Asn Gln Leu Glu Ser Gln  
130 135 140  
Val Glu Arg  
145

<210> 2273  
<211> 113  
<212> PRT  
<213> Pinus radiata

<400> 2273  
Met Gly Arg Gly Lys Ile Glu Ile Lys Lys Ile Glu Asn Ser Val His  
1 5 10 15



Arg Gln Val Thr Phe Cys Lys Arg Arg Gly Gly Leu Met Lys Lys Ala  
 20 25 30  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Asp Val Ala Leu Ile Val Phe  
 35 40 45  
 Ser Ser Arg Gly Lys Leu Tyr Glu Leu Gly Thr Ser Asn Asn Asn Asn  
 50 55 60  
 Asn Ser Met Arg Ser Ile Leu Glu Arg Tyr Gln Lys Cys Ser Gln Thr  
 65 70 75 80  
 Ala Lys His Met Asn Phe Ser Asn Asn Thr Ser Asp Glu Lys Met Lys  
 85 90 95  
 Gln Glu Ile Asn Leu Leu Lys Gln Gln Ile Gly Ser Ala Lys Leu Thr  
 100 105 110  
 Asn

<210> 2274  
 <211> 97  
 <212> PRT  
 <213> Pinus radiata

<400> 2274  
 Ser Trp Lys Ala Asn Pro Cys Thr Val Pro Ser Ser Arg Ile Gly Gly  
 1 5 10 15  
 Phe Gly Gly Gly Gln Val Ile Leu Pro Leu Ala His Thr Val Glu His  
 20 25 30  
 Glu Glu Phe Leu Glu Val Ile Lys Leu Glu Asn His Gly Leu Thr Gln  
 35 40 45  
 Glu Glu Ala Leu Leu Ser Arg Asp Met Phe Leu Leu Gln Leu Cys Ser  
 50 55 60  
 Gly Leu Asp Glu Asn Ala Val Gly Ala Cys Ala Glu Leu Val Phe Ala  
 65 70 75 80  
 Pro Ile Asp Ala Ser Leu Ala Asp Ser Ser Pro Leu Leu Pro Ser Gly  
 85 90 95  
 Phe

<210> 2275  
 <211> 157  
 <212> PRT  
 <213> Pinus radiata

<400> 2275  
 Ser Val Asp Val Leu Thr Ala Phe Ser Thr Gly Asn Gly Gly Thr Ile  
 1 5 10 15  
 Glu Leu Leu Tyr Met Gln Met Tyr Ala Pro Thr Thr Leu Ala Ser Ala  
 20 25 30  
 Arg Asp Phe Trp Thr Leu Arg Tyr Thr Ser Val Leu Glu Asp Gly Ser  
 35 40 45  
 Leu Val Val Cys Glu Arg Ser Leu Ser Gly Thr Gln Gly Gly Pro Ser  
 50 55 60  
 Met Pro Ala Val Gln Gln Phe Val Arg Ala Glu Met Gln Pro Ser Gly  
 65 70 75 80  
 Tyr Leu Ile Arg Pro Cys Glu Gly Gly Gly Ser Leu Ile His Ile Val  
 85 90 95  
 Asp His Met Asp Leu Glu Pro Trp Ser Val Pro Glu Val Leu Arg Pro  
 100 105 110  
 Leu Tyr Glu Ser Ser Thr Val Leu Ala Gln Lys Val Thr Met Ser Ala  
 115 120 125  
 Leu Arg His Leu Arg Gln Ile Ala Gln Glu Ala Ser Ser Asp Val Val  
 130 135 140  
 Leu Gly Trp Gly Arg Gln Pro Ala Ala Leu Arg Thr Phe

145

150

155

<210> 2276  
 <211> 327  
 <212> PRT  
 <213> Eucalyptus grandis

&lt;400&gt; 2276

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Met Val Ser Val Asn Pro Asn Pro Ala Gln Gly Phe Tyr Phe Phe Asp
 1          5          10          15
Pro Ala Asn Thr Arg Ile His Gly Val Asn Ala Gly Ser Ala Ala Glu
 20          25          30
Gly Gly Gly Ala Ala Pro Pro Tyr Ala Glu Asp Pro Ser Lys Lys Val
 35          40          45
Arg Lys Pro Tyr Thr Ile Thr Lys Ser Arg Glu Ser Trp Thr Glu Gln
 50          55          60
Glu His Asp Lys Phe Leu Glu Ala Leu His Leu Phe Asp Arg Asp Trp
 65          70          75          80
Lys Lys Ile Glu Ala Phe Val Gly Ser Lys Thr Val Ile Gln Ile Arg
 85          90          95
Ser His Ala Gln Lys Tyr Phe Leu Lys Val Gln Lys Asn Gly Thr Ser
 100         105         110
Glu His Val Pro Pro Pro Arg Pro Lys Arg Lys Ala Ala His Pro Tyr
 115         120         125
Pro Gln Lys Ala Pro Lys Ala Pro Val Val Ser Gln Val Asn Gly Pro
 130         135         140
Phe Gln Val Ser Ser Ala Phe Leu Glu Pro Gly His Ile Val Arg Pro
 145         150         155         160
Asp Gly Ser Ala Leu Leu Gly Asn Ser Arg Thr Ser Val Ala Leu Ser
 165         170         175
Ser Trp Ser His Asn Ser Val Pro Ala Met Ser Ala Ser Gln Gly Thr
 180         185         190
Lys Asp Val Gly Ile Ser Gly Pro Pro Val Pro Ser Asn Cys Cys Asn
 195         200         205
Ser Ser Ser Asn Asp Ser Thr Pro Arg Ser Trp Pro Asn Ala Gln Ala
 210         215         220
Ile Glu Pro Leu Asp Gln Gln Lys His Leu Arg Val Met Pro Asp Phe
 225         230         235         240
Ala Gln Val Tyr Arg Phe Ile Gly Ser Val Phe Asp Pro Asp Ala Gly
 245         250         255
Gly His Leu Gln Arg Leu Lys Gln Met Asp Pro Ile Asn Leu Glu Thr
 260         265         270
Val Val Leu Leu Met Lys Asn Leu Ser Ala Asn Leu Thr Ser Pro Glu
 275         280         285
Phe Glu Lys Tyr Gln His Gly Leu Phe Ala Ser Tyr Glu Gly Gly Pro
 290         295         300
Glu Lys Ser Lys Ser Gly Gly Ser Phe Lys Leu Leu Pro Glu Lys Ser
 305         310         315         320
Gly Ser Leu Ile Leu Ser Ala
 325

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<210> 2277  
 <211> 225  
 <212> PRT  
 <213> Pinus radiata

&lt;400&gt; 2277

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Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1          5          10          15
Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
 20          25          30

```

Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
                   35                  40                  45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
           50                  55                  60  
 Leu Lys Arg Gly Ser Phe Thr Glu Glu Glu Asp Glu Leu Ile Ile Lys  
   65                  70                  75                  80  
 Leu His Ser Phe Val Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu  
                   85                  90                  95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile  
                   100                  105                  110  
 Lys Arg Lys Leu Leu Ser Lys Gly Leu Asp Pro Gln Thr His Arg Pro  
           115                  120                  125  
 Leu Gly Gln Pro Asn Asn Thr Pro Val Thr Arg Pro Val Leu Glu His  
   130                  135                  140  
 Glu Ile Pro Ala Phe Gln Asn Pro Ala Thr Pro Glu Ile Ala Asp Leu  
  145                  150                  155                  160  
 Leu Gln His His Arg Leu Glu Ser Ser Pro Ile Lys Pro Ala Ala Ser  
                   165                  170                  175  
 Asp Ala Glu Glu His Pro Asp Leu Asn Leu Asn Leu Cys Ile Ser Leu  
                   180                  185                  190  
 Pro Ser Asn Ser Ala Pro Ala Val Asn Arg Val Ser Ser Val Asp Thr  
           195                  200                  205  
 Thr Val Asp Ser Asn Ser Asn Ser Gly Asp Gly Leu Cys Trp Gln Phe  
  210                  215                  220  
 Leu  
 225

&lt;210&gt; 2278

&lt;211&gt; 69

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2278

Met Leu Leu Gln Asn Val Pro Pro Ala Leu Leu Val Arg Phe Leu Arg  
   1                  5                  10                  15  
 Glu His Arg Ser Glu Trp Ala Asp Cys Asn Ile Asp Ala Tyr Ser Ser  
           20                  25                  30  
 Ala Thr Met Lys Ala Asn Ala Tyr Asn Val Pro Gly Ser Leu Gly Gly  
           35                  40                  45  
 Ile Thr Gly Ser Gln Val Ile Leu Pro Leu Ala His Thr Val Glu His  
   50                  55                  60  
 Glu Glu Phe Leu Glu  
 65

&lt;210&gt; 2279

&lt;211&gt; 65

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2279

Met Ala Arg Phe Pro Arg Val Asp Lys Ser Asn Ser Lys Lys Thr Val  
   1                  5                  10                  15  
 Lys Lys Gly Ala Trp Ser Ala Glu Glu Asp Gln Lys Leu Val Ala Tyr  
           20                  25                  30  
 Ile Lys Arg Tyr Gly Ile Trp Asn Trp Thr His Met Ala Glu Pro Ala  
           35                  40                  45  
 Gly Leu Ala Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr  
   50                  55                  60  
 Leu  
 65

<210> 2280  
 <211> 39  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2280  
 Pro Asn Ile Lys His Gly Asn Ile Thr Gln Glu Glu Glu Glu Ile Ile  
 1 5 10 15  
 Ile Asn Leu His Arg Val Leu Gly Asn Arg Trp Ala Ser Ile Ala Ser  
 20 25 30  
 Arg Leu Ser Gly Arg Thr Asp  
 35

<210> 2281  
 <211> 59  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2281  
 Arg Lys Pro Cys Cys Asp Lys Gln Asp Thr Asn Lys Gly Ala Trp Ser  
 1 5 10 15  
 Lys Gln Glu Asp Gln Lys Leu Ile Asp Tyr Ile Arg Lys His Gly Glu  
 20 25 30  
 Gly Cys Trp Arg Thr Leu Pro Lys Ala Ala Gly Leu Leu Arg Cys Gly  
 35 40 45  
 Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
 50 55

<210> 2282  
 <211> 48  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2282  
 Pro Asp Leu Lys Arg Gly Asn Phe Ala Glu Asp Glu Glu Asp Leu Ile  
 1 5 10 15  
 Ile Lys Leu His Ala Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly  
 20 25 30  
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Ser  
 35 40 45

<210> 2283  
 <211> 19  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2283  
 Cys Cys Ser Lys Lys Ala Val Lys Arg Gly Phe Trp Ser Pro Glu Glu  
 1 5 10 15  
 Asp Leu Lys

<210> 2284  
 <211> 45  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2284  
 Trp Thr Arg Glu Glu Asp Asn Leu Leu Ile His Ser Ile Thr Cys His  
 1 5 10 15  
 Gly Glu Gly Arg Trp Asn Met Leu Ala Lys Ser Ala Gly Leu Lys Arg



Gly His Gly Cys Trp Ser Ser Val Pro Lys Leu Ala Gly Leu Gln Arg  
                   35                  40                  45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
           50                          55                  60

<210> 2289  
 <211> 78  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2289  
 Gly Ser Ser Pro Ile Asp Gly Ser Asp Gly Tyr Leu Ser Asp Asp Pro  
   1                  5                  10                  15  
 Ala Pro Gly Ser Arg Ser Ser Asn Arg Arg Val Glu Arg Lys Lys Gly  
                   20                  25                  30  
 Asn Pro Trp Thr Glu Glu Glu His Arg Arg Phe Leu Ile Gly Leu Gln  
           35                          40                  45  
 Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asp Phe Val Thr  
   50                          55                  60  
 Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr  
  65                          70                  75

<210> 2290  
 <211> 53  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2290  
 Lys Lys Gly Asn Pro Trp Thr Glu Glu Glu His Arg Arg Phe Leu Ile  
   1                  5                  10                  15  
 Gly Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asp  
                   20                  25                  30  
 Phe Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys  
           35                          40                  45  
 Tyr Tyr Ile Arg Gln  
  50

<210> 2291  
 <211> 59  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2291  
 Arg Lys Pro Cys Cys Asp Lys Arg Asp Thr Asn Lys Gly Ala Trp Ser  
   1                  5                  10                  15  
 Lys Gln Glu Asp Gln Lys Leu Ile Asp Tyr Ile Gln Lys His Gly Glu  
                   20                  25                  30  
 Gly Ser Trp Arg Thr Leu Pro Gln Ala Ala Gly Leu Leu Arg Cys Gly  
           35                          40                  45  
 Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
  50                          55

<210> 2292  
 <211> 65  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2292  
 Pro Asp Leu Lys Arg Gly Asn Phe Ala Glu Asp Glu Glu Asp Leu Ile  
   1                  5                  10                  15  
 Ile Lys Leu His Ala Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly

20 25 30  
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Ser  
 35 40 45  
 His Leu Arg Arg Lys Leu Leu Lys Met Gly Ile Asp Pro Asn Asn His  
 50 55 60  
 Arg  
 65

<210> 2293  
 <211> 54  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2293  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Glu Glu Asp Gln Arg Leu Ile Asp Tyr Ile Arg Leu His  
 20 25 30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ser Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg  
 50

<210> 2294  
 <211> 65  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2294  
 Met Ala Arg Phe Pro Arg Val Asp Lys Ser Asn Ser Lys Lys Thr Val  
 1 5 10 15  
 Lys Lys Gly Ala Trp Ser Ala Glu Glu Asp Gln Lys Leu Val Ala Tyr  
 20 25 30  
 Ile Lys Arg Tyr Gly Ile Trp Asn Trp Thr His Met Ala Glu Pro Ala  
 35 40 45  
 Gly Leu Ala Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr  
 50 55 60  
 Leu  
 65

<210> 2295  
 <211> 40  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2295  
 Arg Pro Asn Ile Lys His Gly Asn Ile Thr Gln Glu Glu Glu Ile  
 1 5 10 15  
 Ile Ile Asn Leu His Arg Val Leu Gly Asn Arg Trp Ala Ser Ile Ala  
 20 25 30  
 Ser Arg Leu Ser Gly Arg Thr Asp  
 35 40

<210> 2296  
 <211> 41  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2296  
 Arg Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Thr Phe Leu Met  
 1 5 10 15

Gly Leu Glu Lys Met Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn  
                   20                  25                  30  
 Tyr Val Thr Thr Arg Thr Pro Thr Gln  
                   35                  40

<210> 2297  
 <211> 31  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2297  
 Arg Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Thr Phe Leu Met  
   1                  5                  10                  15  
 Gly Leu Glu Lys Met Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg  
                   20                  25                  30

<210> 2298  
 <211> 44  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2298  
 Glu Val Arg Lys Gly Pro Trp Thr Glu Gln Glu Asp Phe Gln Leu Val  
   1                  5                  10                  15  
 Cys Phe Val Gly Leu Phe Gly Asp Arg Arg Trp Asp Phe Ile Ala Lys  
                   20                  25                  30  
 Val Ser Gly Leu Lys Val Ala Gly Glu Asn Asn Arg  
                   35                  40

<210> 2299  
 <211> 61  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2299  
 Met Gly Arg Ser Pro Cys Cys Glu Ser Glu His Met Asn Lys Gly Ala  
   1                  5                  10                  15  
 Trp Ser Lys Glu Glu Asp Glu Arg Leu Ile Ala Tyr Ile Lys Arg His  
                   20                  25                  30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
                   35                  40                  45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
                   50                  55                  60

<210> 2300  
 <211> 67  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2300  
 Pro Asp Leu Lys Arg Gly Asn Phe Ser Asp Glu Glu Asp Glu Leu Ile  
   1                  5                  10                  15  
 Ile Thr Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Ala  
                   20                  25                  30  
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr  
                   35                  40                  45  
 His Ile Lys Arg Lys Leu His Ala Arg Gly Ile Asp Pro Gln Thr His  
                   50                  55                  60  
 Arg Pro Leu  
 65



<210> 2301  
 <211> 50  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2301  
 Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Leu Phe Leu Leu  
 1 5 10 15  
 Gly Leu Gln Lys Val Gly Lys Gly Asp Trp Arg Ala Ile Ser Arg Asn  
 20 25 30  
 Phe Val Lys Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys  
 35 40 45  
 Tyr Phe  
 50

<210> 2302  
 <211> 53  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2302  
 Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Leu Phe Leu Leu  
 1 5 10 15  
 Gly Leu Gln Lys Val Gly Lys Gly Asp Trp Arg Ala Ile Ser Arg Asn  
 20 25 30  
 Phe Val Lys Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys  
 35 40 45  
 Tyr Phe Leu Arg Arg  
 50

<210> 2303  
 <211> 64  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2303  
 Met Ala Ser Ser Ser Val Ala Ser Ala Arg Lys Asp Ala Asp Arg  
 1 5 10 15  
 Ile Lys Gly Pro Trp Ser Pro Glu Glu Asp Glu Ala Leu Gln Arg Leu  
 20 25 30  
 Val Gln Ser Tyr Gly Pro Arg Asn Trp Ser Leu Ile Ser Lys Ser Ile  
 35 40 45  
 Pro Gly Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu  
 50 55 60

<210> 2304  
 <211> 98  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2304  
 Ser Pro Gln Val Glu His Arg Pro Phe Thr Pro Glu Glu Asp Glu Ala  
 1 5 10 15  
 Ile Val Arg Ala His Ala Arg Phe Gly Asn Lys Trp Ala Thr Ile Ala  
 20 25 30  
 Arg Leu Leu Asn Gly Arg Thr Asp Asn Ala Val Lys Asn His Trp Asn  
 35 40 45  
 Ser Thr Leu Lys Arg Lys Cys Ser Ser Thr Cys Ser Ala Gly Gly Asp  
 50 55 60  
 Asp Ala Asp Ala Leu Ala Glu Gln Gln Pro Leu Lys Arg Ser Ala Ser  
 65 70 75 80

Leu Gly Thr Pro Thr Gly Gly Asn Asn Ala Val Ser Asp Leu Phe Phe  
                             85                            90                            95  
 Ser Pro

<210> 2305  
 <211> 50  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2305  
 Leu Arg Lys Gly Leu Trp Ser Pro Glu Glu Asp Asp Lys Leu Met Asn  
   1                            5                            10                            15  
 Tyr Met Leu Asn Asn Gly Gln Gly Cys Trp Ser Asp Val Ala Arg Asn  
                             20                            25                            30  
 Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn  
                             35                            40                            45  
 Tyr Leu  
   50

<210> 2306  
 <211> 60  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2306  
 Pro Asp Leu Lys Arg Gly Ala Phe Ser Pro Gln Glu Glu Glu Leu Ile  
   1                            5                            10                            15  
 Ile His Leu His Ser Ile Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala  
                             20                            25                            30  
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Phe Trp Asn Ser  
                             35                            40                            45  
 Thr Ile Lys Lys Arg Ser Arg Thr Arg His His Leu  
   50                            55                            60

<210> 2307  
 <211> 44  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2307  
 Lys Leu Asp Phe Ser Glu Asp Glu Glu Thr Leu Val Ile Arg Met Tyr  
   1                            5                            10                            15  
 Asn Leu Val Gly Glu Arg Trp Ser Leu Ile Ala Gly Arg Ile Pro Gly  
                             20                            25                            30  
 Arg Thr Ala Glu Glu Ile Glu Lys Tyr Trp Asn Ser  
                             35                            40

<210> 2308  
 <211> 61  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2308  
 Met Gly Arg Gln Pro Cys Cys Asp Lys Leu Gly Val Lys Lys Gly Pro  
   1                            5                            10                            15  
 Trp Thr Ala Glu Glu Asp Arg Lys Leu Val Asn Phe Ile Leu Thr His  
                             20                            25                            30  
 Gly Gln Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Arg Arg  
                             35                            40                            45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu

50

55

60

<210> 2309  
 <211> 64  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2309  
 Pro Asp Leu Lys Arg Gly Leu Leu Asn Glu Ala Glu Glu Ser Leu Val  
 1 5 10 15  
 Ile Asp Leu His Ala Thr Leu Gly Asn Arg Trp Ser Lys Ile Ala Ala  
 20 25 30  
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn His Trp Asn Thr  
 35 40 45  
 His Ile Lys Lys Lys Leu Ile Arg Met Gly Ile Asp Pro Val Thr His  
 50 55 60

<210> 2310  
 <211> 61  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2310  
 Met Gly Arg Gln Pro Cys Cys Asp Lys Ser Gly Val Lys Lys Gly Pro  
 1 5 10 15  
 Trp Thr Ala Glu Asp Lys Lys Leu Ile Asn Phe Ile Leu Thr Asn  
 20 25 30  
 Gly His Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Arg Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu  
 50 55 60

<210> 2311  
 <211> 67  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2311  
 Pro Asp Leu Lys Arg Gly Leu Leu Ser Glu Ala Glu Glu Gln Leu Val  
 1 5 10 15  
 Ile Asp Leu His Ala Arg Leu Gly Asn Arg Trp Ser Lys Ile Ala Ala  
 20 25 30  
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn His Trp Asn Thr  
 35 40 45  
 His Ile Lys Lys Lys Leu Leu Lys Met Gly Ile Asp Pro Val Thr His  
 50 55 60  
 Glu Pro Leu  
 65

<210> 2312  
 <211> 50  
 <212> PRT  
 <213> Pinus radiata

<400> 2312  
 Lys Lys Gly Val Pro Trp Ser Glu Glu Glu His Arg Met Phe Leu Tyr  
 1 5 10 15  
 Gly Leu Glu Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn  
 20 25 30  
 Phe Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys  
 35 40 45

Tyr Phe

50

&lt;210&gt; 2313

&lt;211&gt; 53

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2313

Lys Lys Gly Val Pro Trp Ser Glu Glu Glu His Arg Met Phe Leu Tyr  
 1 5 10 15  
 Gly Leu Glu Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn  
 20 25 30  
 Phe Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys  
 35 40 45  
 Tyr Phe Leu Arg Gln  
 50

&lt;210&gt; 2314

&lt;211&gt; 60

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2314

Gly Lys Ser Pro Gly His Asp Glu Pro Asp Arg Ile Lys Gly Pro Trp  
 1 5 10 15  
 Ser Pro Glu Glu Asp Ala Ala Leu Gln His Phe Val Gln Lys Tyr Gly  
 20 25 30  
 Pro Arg Asn Trp Ser Leu Ile Ser Lys Ala Ile Pro Gly Arg Ser Gly  
 35 40 45  
 Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser  
 50 55 60

&lt;210&gt; 2315

&lt;211&gt; 60

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2315

Pro Gln Val Glu His Arg Pro Phe Thr Pro Glu Glu Asp Ala Thr Ile  
 1 5 10 15  
 Val Arg Ala His Ala Gln His Gly Asn Lys Trp Ala Thr Ile Ala Arg  
 20 25 30  
 Met Leu Ser Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn Ser  
 35 40 45  
 Thr Leu Arg Arg Arg Cys Gln Gly Gly Gly Ala Leu  
 50 55 60

&lt;210&gt; 2316

&lt;211&gt; 20

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2316

Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Val  
 1 5 10 15  
 Gly Leu Gln Arg  
 20

&lt;210&gt; 2317

&lt;211&gt; 18

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2137

Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Val  
 1 5 10 15  
 Gly Leu

&lt;210&gt; 2318

&lt;211&gt; 10

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2318

Lys Arg Gly Val Pro Trp Thr Glu Glu Glu  
 1 5 10

&lt;210&gt; 2319

&lt;211&gt; 14

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2319

Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe  
 1 5 10

&lt;210&gt; 2320

&lt;211&gt; 68

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2320

Met Arg Cys Thr Arg Trp Gln Gly Leu Pro Phe Ser Ser Lys Pro Lys  
 1 5 10 15  
 Val Lys Lys Gly Leu Trp Ser Pro Glu Glu Asp Glu Lys Leu Ile Asn  
 20 25 30  
 Tyr Met Met Lys Asn Gly Leu Leu Gly Cys Ser Trp Ser Tyr Val Ala  
 35 40 45  
 Lys Gln Ile Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp  
 50 55 60  
 Thr Asn Tyr Leu  
 65

&lt;210&gt; 2321

&lt;211&gt; 62

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2321

Met Gly Arg Ala Pro Cys Cys Asp Lys Ala Asn Val Lys Lys Gly Pro  
 1 5 10 15  
 Trp Ser Pro Glu Glu Asp Thr Lys Leu Lys Ala Phe Ile Glu Gln His  
 20 25 30  
 Gly Thr Gly Gly Asn Trp Ile Ala Leu Pro Gln Lys Ala Gly Leu Lys  
 35 40 45  
 Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu  
 50 55 60

&lt;210&gt; 2322

&lt;211&gt; 60

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2322

Met	Gly	Arg	Ser	Pro	Cys	Cys	Glu	Lys	Ala	His	Thr	Asn	Lys	Gly	Ala
1				5					10					15	
Trp	Thr	Lys	Glu	Glu	Asp	Asp	Arg	Leu	Ile	Ala	His	Ile	Arg	Thr	His
			20					25					30		
Gly	Glu	Gly	Cys	Trp	Arg	Ser	Leu	Pro	Lys	Ala	Ala	Gly	Leu	Met	Arg
		35					40					45			
Cys	Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Ile	Asn	Tyr				
	50					55					60				

&lt;210&gt; 2323

&lt;211&gt; 46

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2323

Arg	Pro	Asp	Leu	Lys	Arg	Gly	Asn	Phe	Ser	Glu	Glu	Glu	Asp	Glu	Leu
1				5				10						15	
Ile	Ile	Lys	Leu	His	Ser	Leu	Leu	Gly	Asn	Lys	Trp	Ser	Leu	Ile	Ala
			20					25					30		
Gly	Arg	Leu	Pro	Gly	Arg	Thr	Asp	Asn	Glu	Ile	Lys	Asn	Tyr		
		35					40					45			

&lt;210&gt; 2324

&lt;211&gt; 61

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2324

Met	Gly	Arg	Ala	Pro	Cys	Cys	Glu	Lys	Val	Gly	Leu	Lys	Lys	Gly	Pro
1				5					10					15	
Trp	Thr	Pro	Glu	Glu	Asp	Gln	Lys	Leu	Leu	Ala	Tyr	Ile	Gln	Glu	His
			20					25					30		
Gly	His	Gly	Ser	Trp	Arg	Ala	Leu	Pro	Gln	Lys	Ala	Gly	Leu	Leu	Arg
		35					40					45			
Cys	Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Thr	Asn	Tyr	Leu			
	50					55					60				

&lt;210&gt; 2325

&lt;211&gt; 61

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2325

Met	Gly	Arg	Ser	Pro	Cys	Cys	Glu	Lys	Ala	His	Thr	Asn	Lys	Gly	Ala
1				5					10					15	
Trp	Thr	Lys	Glu	Glu	Asp	Asp	Arg	Leu	Ile	Ala	His	Ile	Arg	Thr	His
			20					25					30		
Gly	Glu	Gly	Cys	Trp	Arg	Ser	Leu	Pro	Lys	Ala	Ala	Gly	Leu	Met	Arg
		35					40					45			
Cys	Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Ile	Asn	Tyr	Leu			
	50					55					60				

&lt;210&gt; 2326

&lt;211&gt; 45

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2326

Pro Asp Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Val  
 1 5 10 15  
 Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly  
 20 25 30  
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr  
 35 40 45

&lt;210&gt; 2327

&lt;211&gt; 50

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2327

Lys Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Leu  
 1 5 10 15  
 Gly Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asn  
 20 25 30  
 Phe Val Ile Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys  
 35 40 45  
 Tyr Phe  
 50

&lt;210&gt; 2328

&lt;211&gt; 53

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2328

Lys Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Leu  
 1 5 10 15  
 Gly Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asn  
 20 25 30  
 Phe Val Ile Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys  
 35 40 45  
 Tyr Phe Ile Arg Gln  
 50

&lt;210&gt; 2329

&lt;211&gt; 48

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2329

Gln Arg Glu Arg Trp Ser Glu Asp Glu His Leu Lys Phe Leu Glu Ala  
 1 5 10 15  
 Leu Lys Met Tyr Gly Arg Ala Trp Arg Arg Ile Glu Glu His Ile Gly  
 20 25 30  
 Thr Lys Thr Ala Val Gln Ile Arg Ser His Ala Gln Lys Phe Phe Ser  
 35 40 45

&lt;210&gt; 2330

&lt;211&gt; 42

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2330

Gln Arg Glu Arg Trp Ser Glu Asp Glu His Leu Lys Phe Leu Glu Ala  
 1 5 10 15  
 Leu Lys Met Tyr Gly Arg Ala Trp Arg Arg Ile Glu Glu His Ile Gly  
 20 25 30

Thr Lys Thr Ala Val Gln Ile Arg Ser His  
35 40

<210> 2331  
<211> 61  
<212> PRT  
<213> Pinus radiata

<400> 2331  
Met Gly Arg Thr Pro Cys Cys Leu Lys Val Gly Leu Asn Arg Gly Pro  
1 5 10 15  
Trp Thr Pro Glu Glu Asp Leu Cys Leu Ser Asn Tyr Ile Glu Ala His  
20 25 30  
Gly Glu Gly Gly Trp Arg Thr Leu Pro Lys Lys Ala Gly Leu Leu Arg  
35 40 45  
Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu  
50 55 60

<210> 2332  
<211> 67  
<212> PRT  
<213> Pinus radiata

<400> 2332  
Pro Asp Val Lys His Gly His Ile Leu Pro Glu Glu Glu Asp Leu Ile  
1 5 10 15  
Leu Arg Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly  
20 25 30  
Arg Met Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Thr  
35 40 45  
His Leu Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His  
50 55 60  
Lys Pro Leu  
65

<210> 2333  
<211> 55  
<212> PRT  
<213> Pinus radiata

<400> 2333  
Cys Glu Asp Leu Asp Arg Ile Lys Gly Pro Trp Ser Pro Glu Glu Asp  
1 5 10 15  
Ala Ser Leu Gln Arg Leu Val Gln Lys Tyr Gly Pro Arg Asn Trp Thr  
20 25 30  
Leu Ile Ser Lys Gly Ile Pro Gly Arg Ser Gly Lys Ser Cys Arg Leu  
35 40 45  
Arg Trp Cys Asn Gln Leu Ser  
50 55

<210> 2334  
<211> 56  
<212> PRT  
<213> Pinus radiata

<400> 2334  
Lys Gly Pro Trp Ser Pro Glu Glu Asp Ala Ser Leu Gln Arg Leu Val  
1 5 10 15  
Gln Lys Tyr Gly Pro Arg Asn Trp Thr Leu Ile Ser Lys Gly Ile Pro  
20 25 30  
Gly Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser



35 40 45  
 Pro Gln Val Glu His Arg Pro Phe  
 50 55  
 <210> 2335  
 <211> 34  
 <212> PRT  
 <213> Pinus radiata  
 <400> 2335  
 Met Gly Ala Pro Lys Gln Lys Trp Thr Ser Glu Glu Glu Gly Ala Leu  
 1 5 10 15  
 Arg Ala Gly Val Glu Lys Tyr Gly Ala Gly Lys Trp Gln Thr Ile Leu  
 20 25 30  
 Lys Asp

<210> 2336  
 <211> 51  
 <212> PRT  
 <213> Pinus radiata  
 <400> 2336  
 Leu Arg Lys Gly Leu Trp Ser Pro Asp Glu Asp Ile Glu Leu Thr Thr  
 1 5 10 15  
 Tyr Ile Met Arg Lys Gly Leu Met Gly Cys Trp Asn Tyr Ile Ala Lys  
 20 25 30  
 Gln Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile  
 35 40 45  
 Asn Tyr Leu  
 50

<210> 2337  
 <211> 45  
 <212> PRT  
 <213> Pinus radiata  
 <400> 2337  
 Pro Gly Leu Lys Arg Cys Ala Ile Ser Pro Gln Glu Glu Arg Leu Ile  
 1 5 10 15  
 Ile Gln Leu Gln Ser Ser Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala  
 20 25 30  
 His Leu Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr  
 35 40 45

<210> 2338  
 <211> 62  
 <212> PRT  
 <213> Pinus radiata  
 <400> 2338  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Gln Gln Glu Asp Thr Arg Leu Val Ala His Ile Arg Ala His  
 20 25 30  
 Gly Gln Gly Gly Trp Ser Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Gln Arg Trp Ile Asn Tyr Leu His  
 50 55 60

<210> 2339

<211> 39  
 <212> PRT  
 <213> Pinus radiata

<400> 2339  
 Pro Asp Leu Lys Arg Ser Asn Phe Ser Glu Glu Glu Asp Glu Leu Ile  
 1 5 10 15  
 Val Arg Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly  
 20 25 30  
 Arg Leu Pro Gly Arg Thr Asp  
 35

<210> 2340  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata

<400> 2340  
 Gly Thr His Pro Ala Pro Ser Lys Pro Lys Leu Arg Lys Gly Leu Trp  
 1 5 10 15  
 Ser Pro Val Glu Asp Asn Gln Leu Thr Asn Tyr Ile Leu Arg Arg Gly  
 20 25 30  
 Leu Val Gly Cys Trp Asn Tyr Val Ala Lys Gln Ala Gly Leu Gln Arg  
 35 40 45  
 Thr Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
 50 55 60

<210> 2341  
 <211> 43  
 <212> PRT  
 <213> Pinus radiata

<400> 2341  
 Pro Gly Leu Lys Arg His Pro Ile Ser Arg Gln Glu Glu Gln Leu Ile  
 1 5 10 15  
 Ile Glu Leu Gln Ser Ile Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala  
 20 25 30  
 Gln Leu Pro Gly Arg Thr Asp Ile Glu Ile Lys  
 35 40

<210> 2342  
 <211> 61  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2342  
 Met Gly Arg His Ser Cys Cys Tyr Lys Gln Lys Leu Arg Lys Gly Leu  
 1 5 10 15  
 Trp Ser Pro Glu Glu Asp Glu Lys Leu Leu Arg His Ile Ser Gln Tyr  
 20 25 30  
 Gly His Gly Cys Trp Ser Ser Val Pro Lys Gln Ala Gly Leu Gln Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
 50 55 60

<210> 2343  
 <211> 67  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2343

Pro Asp Leu Lys Arg Gly Ala Phe Ser Gln Asp Glu Glu Asp Leu Ile  
 1 5 10 15  
 Ile Glu Leu His Ala Ala Leu Gly Asn Lys Trp Ser Gln Ile Ala Ala  
 20 25 30  
 Asn Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Leu Trp Asn Ser  
 35 40 45  
 Cys Leu Lys Lys Lys Leu Arg Gln Arg Gly Ile Asp Pro Val Ser His  
 50 55 60  
 Arg Pro Leu  
 65

<210> 2344  
 <211> 58  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2344  
 Thr Pro Cys Cys Ser Lys Val Gly Ile Lys Arg Gly Pro Trp Thr Pro  
 1 5 10 15  
 Glu Glu Asp Glu Val Leu Ala Ser Tyr Val Arg Arg Glu Gly Glu Gly  
 20 25 30  
 Arg Trp Arg Thr Leu Pro Lys Arg Ala Gly Leu Gln Arg Cys Gly Lys  
 35 40 45  
 Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu  
 50 55

<210> 2345  
 <211> 67  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2345  
 Pro Ser Val Lys Arg Gly Gln Ile Ala Pro Asp Glu Glu Asp Leu Ile  
 1 5 10 15  
 Leu Arg Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly  
 20 25 30  
 Arg Ile Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr  
 35 40 45  
 His Leu Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His  
 50 55 60  
 Lys Pro Leu  
 65

<210> 2346  
 <211> 67  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2346  
 Met Asp Lys Lys Pro Asp Asp Asp Ser Gly Lys Ser Gln Asp Val Glu  
 1 5 10 15  
 Val Arg Lys Gly Pro Trp Thr Met Glu Glu Asp Leu Ile Leu Ile Asn  
 20 25 30  
 Tyr Ile Ala Asn His Gly Glu Gly Ser Trp Asn Ser Leu Ala Lys Ala  
 35 40 45  
 Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn  
 50 55 60  
 Tyr Leu Arg  
 65

<210> 2347

<211> 56  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2347  
 Pro Asp Val Arg Arg Gly Asn Ile Thr Thr Glu Glu Gln Leu Leu Ile  
 1 5 10 15  
 Met Glu Leu His Ala Lys Trp Gly Asn Arg Trp Ser Lys Ile Ala Lys  
 20 25 30  
 His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Phe Trp Arg Thr  
 35 40 45  
 Arg Ile Gln Lys His Ile Lys Gln  
 50 55

<210> 2348  
 <211> 63  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2348  
 Met Asp Lys Lys Pro Cys Tyr Arg Thr Gln Asp Pro Gln Val Arg Lys  
 1 5 10 15  
 Gly Pro Trp Thr Leu Glu Glu Asp Leu Ile Leu Met Asp Tyr Ile Ala  
 20 25 30  
 Asn His Gly Glu Gly Val Trp Asn Ser Leu Ala Lys Ala Gly Leu  
 35 40 45  
 Gln Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu  
 50 55 60

<210> 2349  
 <211> 54  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2349  
 Pro Asp Val Arg Arg Gly Asn Ile Thr Pro Glu Glu Gln Leu Leu Ile  
 1 5 10 15  
 Ile His Leu Gln Ser Met Trp Gly Asn Arg Trp Ser Glu Ile Ala Lys  
 20 25 30  
 His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg Thr  
 35 40 45  
 Lys Ile Gln Lys His Ile  
 50

<210> 2350  
 <211> 47  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2350  
 Ser Arg Glu Ser Trp Thr Glu Gln Glu His Asp Lys Phe Leu Glu Ala  
 1 5 10 15  
 Leu His Leu Phe Asp Arg Asp Trp Lys Lys Ile Glu Ala Phe Val Gly  
 20 25 30  
 Ser Lys Thr Val Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe  
 35 40 45

<210> 2351  
 <211> 59  
 <212> PRT  
 <213> Eucalyptus grandis

&lt;400&gt; 2351

Ser Trp Thr Glu Gln Glu His Asp Lys Phe Leu Glu Ala Leu His Leu  
 1 5 10 15  
 Phe Asp Arg Asp Trp Lys Lys Ile Glu Ala Phe Val Gly Ser Lys Thr  
 20 25 30  
 Val Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe Leu Lys Val Gln  
 35 40 45  
 Lys Asn Gly Thr Ser Glu His Val Pro Pro Pro  
 50 55

&lt;210&gt; 2352

&lt;211&gt; 45

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2352

Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His  
 20 25 30  
 Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly  
 35 40 45

&lt;210&gt; 2353

&lt;211&gt; 45

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2353

Met Gly Arg Ala Pro Cys Cys Glu Lys Val Gly Leu Lys Lys Gly Pro  
 1 5 10 15  
 Trp Thr Pro Glu Glu Asp Gln Lys Leu Val Thr Tyr Ile Gln Glu His  
 20 25 30  
 Gly His Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly  
 35 40 45

&lt;210&gt; 2354

&lt;211&gt; 61

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2354

Met Gly Arg Ser Pro Cys Cys Ala Lys Glu Gly Leu Asn Arg Gly Ala  
 1 5 10 15  
 Trp Thr Lys Thr Glu Asp Ile Ile Leu Ser Glu Tyr Ile Arg Ile His  
 20 25 30  
 Gly Asp Gly Gly Trp Arg Ser Leu Pro Lys Lys Ala Gly Leu Lys Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu  
 50 55 60

&lt;210&gt; 2355

&lt;211&gt; 61

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2355

Met Gly Arg Ala Pro Cys Cys Ser Asn Asp Asp Arg Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Gln Tyr Ile Lys Val His

20 25 30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
 50 55 60

<210> 2356  
 <211> 68  
 <212> PRT  
 <213> Pinus radiata

<400> 2356  
 Pro Asp Leu Lys Arg Gly Phe Phe Ser Glu Asp Glu Asp Asp Leu Ile  
 1 5 10 15  
 Leu Lys Leu His Ala Leu Leu Gly Asn Asn Arg Trp Ser Leu Ile Ala  
 20 25 30  
 Gly Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn  
 35 40 45  
 Ser His Leu Lys Arg Lys Leu Ile Ser Met Gly Ile Asp Pro Leu Thr  
 50 55 60  
 His Arg Pro Phe  
 65

<210> 2357  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata

<400> 2357  
 Met Gly Arg Ala Pro Cys Cys Ser Asn Gly Asp Arg Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Gln Tyr Ile Lys Val His  
 20 25 30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Asn Ala Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
 50 55 60

<210> 2358  
 <211> 39  
 <212> PRT  
 <213> Pinus radiata

<400> 2358  
 Pro Asp Leu Lys Arg Gly Phe Phe Ser Glu Asp Glu Asp Asp Leu Ile  
 1 5 10 15  
 Leu Lys Leu His Ala Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly  
 20 25 30  
 Arg Leu Pro Gly Arg Thr Asp  
 35

<210> 2359  
 <211> 62  
 <212> PRT  
 <213> Pinus radiata

<400> 2359  
 Met Gly Arg Thr Pro Cys Cys Glu Lys Asn Ile Gly Leu Lys Lys Gly  
 1 5 10 15  
 Pro Trp Thr Pro Glu Glu Asp Gln Lys Leu Ile Asp Tyr Ile Gln Ser  
 20 25 30

His Gly His Gly Ser Trp Arg Ala Leu Pro Lys Arg Ala Gly Leu Leu  
           35                  40                  45  
 Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu  
       50                  55                  60

<210> 2360  
 <211> 66  
 <212> PRT  
 <213> Pinus radiata

<400> 2360  
 Pro Asp Ile Lys Arg Gly Gln Phe Ser Phe Glu Glu Glu Gln Thr Ile  
   1                  5                  10                  15  
 Ile Glu Leu His Ala Val Leu Gly Asn Lys Trp Ser Thr Ile Ala Gly  
           20                  25                  30  
 His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr  
       35                  40                  45  
 His Leu Lys Lys Arg Leu Leu Gln Met Gly Ile Asp Pro Val Thr His  
       50                  55                  60  
 Arg Pro  
 65

<210> 2361  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata

<400> 2361  
 Met Gly Arg Thr Pro Cys Cys Leu Lys Val Gly Leu Asn Arg Gly Pro  
   1                  5                  10                  15  
 Trp Thr Pro Glu Glu Asp Leu Cys Leu Ser Asn Tyr Ile Glu Ala His  
           20                  25                  30  
 Gly Glu Gly Gly Trp Arg Thr Leu Pro Lys Lys Ala Gly Leu Leu Arg  
       35                  40                  45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu  
       50                  55                  60

<210> 2362  
 <211> 67  
 <212> PRT  
 <213> Pinus radiata

<400> 2362  
 Pro Asp Val Lys His Gly His Ile Leu Pro Glu Glu Glu Asp Leu Ile  
   1                  5                  10                  15  
 Leu Arg Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly  
           20                  25                  30  
 Arg Met Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Thr  
       35                  40                  45  
 His Leu Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His  
       50                  55                  60  
 Lys Pro Leu  
 65

<210> 2363  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata

<400> 2363  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala

```

      1           5           10           15
Trp Thr Lys  Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
      20           25           30
Gly Glu Gly  Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
      35           40           45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
      50           55           60

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<210> 2364  
 <211> 67  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 2364
Pro Asp Leu Lys Arg Gly Ser Phe Thr Glu Glu Glu Asp Glu Leu Ile
      1           5           10           15
Ile Lys Leu His Ser Phe Val Gly Asn Lys Trp Ser Leu Ile Ala Gly
      20           25           30
Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
      35           40           45
His Ile Lys Arg Lys Leu Leu Ser Lys Gly Leu Asp Pro Gln Thr His
      50           55           60
Arg Pro Leu
      65

```

<210> 2365  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 2365
Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
      1           5           10           15
Trp Thr Lys  Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
      20           25           30
Gly Glu Gly  Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
      35           40           45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
      50           55           60

```

<210> 2366  
 <211> 67  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 2366
Pro Asp Leu Lys Arg Gly Ser Phe Thr Glu Glu Glu Asp Glu Leu Ile
      1           5           10           15
Ile Lys Leu His Ser Phe Val Gly Asn Lys Trp Ser Leu Ile Ala Gly
      20           25           30
Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
      35           40           45
His Ile Lys Arg Lys Leu Leu Ser Lys Gly Leu Asp Pro Gln Thr His
      50           55           60
Arg Pro Leu
      65

```

<210> 2367  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata



&lt;400&gt; 2367

```

Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1           5           10           15
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
           20           25           30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
           35           40           45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
 50           55           60

```

&lt;210&gt; 2368

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2368

```

Pro Asp Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Val
 1           5           10           15
Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly
           20           25           30
Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
           35           40           45
His Ile Lys Arg Lys Leu Leu Asn Arg Gly Leu Asp Pro Gln Ser His
           50           55           60
Arg Pro Leu
65

```

				85					90					95			
Ala	Tyr	Asp	Phe	Ala	Ala	Tyr	Cys	Leu	Arg	Gly	Ser	Lys	Ala	Arg	Phe		
			100					105					110				
Asn	Phe	Pro	Asp	Ser	Pro	Pro	Glu	Ile	Pro	Cys	Ala	Ser	Ser	Leu	Ser		
		115					120					125					
Pro	Ser	Gln	Ile	Gln	Ala	Gly	Ala	Ala	Arg	Phe	Ala	Ala	Glu	Glu	Phe		
	130					135					140						
Gln	Met	Pro	Ser	Asp	Asp	Asp	Thr	Ala	Ser	Ser	Ser	Cys	Gly	Ser	Glu		
145				150					155						160		
Ala	Glu	Ser	Asp	Leu	Pro	Pro	Glu	Ile	Pro	Cys	Ala	Ser	Ser	Val	Ser		
			165						170					175			
Pro	Pro	Pro	Ile	Gln	Ala	Ala	Ala	Pro	Arg	Phe	Ala	Ala	Glu	Glu	Phe		
			180					185					190				
Arg	Leu	Pro	Ser	Asp	Glu	Asp	Thr	Ala	Ser	Ser	Ser	Cys	Gly	Ser	Val		
	195					200						205					
Thr	Glu	Ser	Asn	Ile	Asp	Ser	Gln	Gln	Ile	Ser	Ala	Glu	Gln	Gly	Ser		
	210				215						220						
Ala	Phe	Trp	Asp	Ser	Leu	Phe	Leu										
225					230												

&lt;210&gt; 1026

&lt;211&gt; 88

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1026

His	Gln	Trp	His	Arg	Phe	Cys	Ser	Arg	Arg	Leu	Cys	Cys	Thr	Ala	Leu		
1				5					10					15			
His	Asn	Thr	Gln	Lys	Gln	Cys	Thr	Lys	Ser	Ala	Ala	Thr	Gly	Lys	Gly		
		20						25					30				
Gly	Ile	Lys	Arg	Ile	Arg	Arg	Gln	Gln	Glu	Ala	Ala	Pro	Ser	Pro	Pro		
	35					40						45					
Glu	Glu	Ala	Thr	Leu	Asn	Gln	Gln	Thr	Pro	Pro	Tyr	Arg	Gly	Val	Arg		
	50				55						60						
Arg	Arg	Asn	Trp	Gly	Lys	Trp	Val	Ser	Glu	Ile	Arg	Glu	Pro	Lys	Lys		
65					70				75					80			
Lys	Thr	Arg	Ile	Trp	Leu	Gly	Ser										
				85													

&lt;210&gt; 1027

&lt;211&gt; 501

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1027

Met	Cys	Gly	Gly	Ala	Ile	Ile	Ser	Asp	Phe	Ile	Ile	Pro	Pro	Ala	Ser		
1				5					10					15			
Arg	Gly	Arg	Arg	Val	Thr	Ala	Arg	Asp	Ile	Trp	Pro	Asp	Phe	Asp	Lys		
		20						25					30				
Phe	Ser	Glu	Phe	Ile	Asn	Gly	Gly	Ala	Ala	Val	Glu	Ser	Phe	Asp	Val		
	35					40						45					
Ser	Val	Asp	Val	Asp	Asp	Asp	Glu	Glu	Asp	Ser	Asp	Asp	Asp	Glu	Phe		
	50				55						60						
Leu	Asp	Phe	Glu	Glu	Ser	Tyr	Gln	Asn	Lys	Lys	Lys	Lys	Gln	Gln	Gln		
65					70				75					80			
Pro	Ile	Ser	Pro	Thr	Lys	Gly	Phe	Glu	Leu	Pro	Leu	Ala	Arg	Gly	Leu		
				85				90						95			
Asp	Gly	Pro	Ala	Ala	Lys	Ser	Ala	Val	Arg	Lys	Arg	Lys	Asn	Leu	Tyr		
		100						105					110				
Arg	Gly	Ile	Arg	Gln	Arg	Pro	Trp	Gly	Lys	Trp	Ala	Ala	Glu	Ile	Arg		
	115					120						125					

Asp Pro Arg Lys Gly Ala Arg Val Trp Leu Gly Thr Phe Asn Thr Ala  
 130 135 140  
 Glu Glu Ala Ala Arg Ala Tyr Asp Ala Ala Arg Lys Ile Arg Gly  
 145 150 155 160  
 Lys Lys Ala Lys Val Asn Phe Val Asp Glu Pro Pro Pro Ser Val Lys  
 165 170 175  
 Lys Glu Ser Asn Asn Ala Lys Gly Ser Lys Lys Gly Ser Ser Lys Lys  
 180 185 190  
 Ile Lys Ser Tyr Thr Thr Pro Lys Ala Asp Phe Phe Glu Gly Phe Lys  
 195 200 205  
 Thr Ala Asn Pro Ser Ile Ala Gln Tyr Asn Phe His Gln Lys Phe Pro  
 210 215 220  
 Asn Pro Ser Cys Asp Asp Leu Gly Tyr Gln Asn Pro Leu Ser Pro Leu  
 225 230 235 240  
 His Ala Ile Cys Asn Arg Asn Phe Ala Ala Lys Gln Ser Ser Ser Ala  
 245 250 255  
 Leu Pro Ala Tyr Ser Thr Glu Phe Ser Asp Phe Asp Asp Ser Glu Val  
 260 265 270  
 Asp Asn Leu Val Pro Gln Pro Ala Ser Phe Glu Pro Met Lys Asn Ile  
 275 280 285  
 Asn Lys Arg Lys Gly Tyr Asn Ser Phe Glu Ser Asp Thr Ser Ser Val  
 290 295 300  
 Ser Ala Asp Arg Ser His Ile Ser Trp Val Thr Glu Val Lys Thr Pro  
 305 310 315 320  
 Glu Ile Ser Ser Val Pro Lys Ala Glu Ala Asp Ser Asp His Tyr Asp  
 325 330 335  
 Phe Ala Asp Met Ser Thr Pro Val Ala Thr Ser Val Ser Ala Gly Ser  
 340 345 350  
 Pro Glu Val Gln Leu Pro Pro Phe Asn Asn Gly Leu Asn Lys Ser Pro  
 355 360 365  
 Ser Val Glu Asp Gly Val Ala Ala Glu Lys Ser Pro Lys Leu Glu Glu  
 370 375 380  
 Ser Ser Gln Leu Glu Ile Ser Glu Asp Leu Pro Ser Leu Glu Ser Tyr  
 385 390 395 400  
 Pro Trp Leu Phe Gln Met Pro Tyr Phe Glu Gly Leu Asp Gln Ser Leu  
 405 410 415  
 Gln Gly Val Gly Ile Gly Asp Ala Ser Phe Pro Asp Gly Glu Asn Asp  
 420 425 430  
 Leu Gln Leu Trp Ser Phe Asp Ala Val Pro Ile Ser Asp Ser Ala Tyr  
 435 440 445  
 Ile Ser Leu Glu Ser Leu Ala Cys Lys Gln Leu Val Ile Met Glu Ser  
 450 455 460  
 Arg Arg Leu Val Met Ala Ser Phe Cys Arg Pro Ser Ser Asn Arg Glu  
 465 470 475 480  
 Leu Val Ile Phe Pro Leu Phe Phe Phe Ile Gln Phe Asp Gly Ala Thr  
 485 490 495  
 Val Ile Ser Ala His  
 500

&lt;210&gt; 1028

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1028

Met Ala Phe Ala Gly Thr Gln Gln Lys Cys Lys Ala Cys Glu Lys Thr  
 1 5 10 15  
 Val Tyr Val Val Asp Gln Leu Thr Ala Asp Gly Ser Val Phe His Lys  
 20 25 30  
 Ala Cys Phe Arg Cys His His Cys Asn Gly Thr Leu Lys Leu Ser Asn  
 35 40 45

Tyr Ser Ser Phe Glu Gly Val Leu Tyr Cys Lys Pro His Phe Asp Gln  
 50 55 60  
 Leu Phe Lys Arg Thr Gly Ser Leu Asp Lys Ser Phe Glu Gly Thr Pro  
 65 70 75 80  
 Lys Ala Val Lys Asn Glu Lys Leu Asn Asp Gly Glu Ile Lys Thr Pro  
 85 90 95  
 Asn Arg Val Ser Ala Leu Phe Ser Gly Thr Gln Glu Lys Cys Leu Ala  
 100 105 110  
 Cys Gly Asn Thr Val Tyr Pro Ile Glu Lys Val Ser Val Glu Gly Val  
 115 120 125  
 Gly Tyr His Lys Ala Cys  
 130

<210> 1029  
 <211> 76  
 <212> PRT  
 <213> Pinus radiata

<400> 1029  
 Met Asp Gly Ser Gln Asn Ser Gly Gly Asn Ala Val Pro Pro Phe Leu  
 1 5 10 15  
 Thr Lys Thr Tyr Asp Met Val Asp Asp Ser Ser Thr Asp Ser Ile Val  
 20 25 30  
 Ser Trp Ser Pro Gly Asn Asn Ser Phe Ile Val Trp Asn Pro Pro Glu  
 35 40 45  
 Phe Ala Arg Asp Leu Leu Pro Lys Tyr Phe Lys His Asn Asn Phe Ser  
 50 55 60  
 Ser Phe Val Arg Gln Leu Asn Thr Tyr Gly Phe Arg  
 65 70 75

<210> 1030  
 <211> 97  
 <212> PRT  
 <213> Pinus radiata

<400> 1030  
 His Glu Lys Lys Ala Val Leu Trp Asn Met Asp Thr Leu Lys Ala Lys  
 1 5 10 15  
 Gly Ser Leu Glu Glu His Ser Phe Leu Ile Thr Asp Val Arg Phe Ser  
 20 25 30  
 Pro Asn Ser Thr Arg Leu Ala Thr Ser Ser Phe Asp Arg Thr Val Lys  
 35 40 45  
 Val Trp Asp Ala Asp Asn Pro Asn Tyr Thr Leu Arg Thr Phe Ser Gly  
 50 55 60  
 His Thr Gly Ser Val Met Ser Leu Asp Phe His Pro Asn Asn Glu Asp  
 65 70 75 80  
 Leu Ile Cys Ser Cys Asp Gly Glu Ser Glu Val Arg Tyr Trp Ser Val  
 85 90 95  
 Asn

<210> 1031  
 <211> 117  
 <212> PRT  
 <213> Pinus radiata

<400> 1031  
 Met Gly Tyr Leu Gln Glu Leu Glu Asp Gln Ile Ile Gly Leu Gln Asn  
 1 5 10 15  
 Leu Val Lys Arg Asn Glu Arg Leu Tyr Gly Ser Gly Asn Thr Pro Ser  
 20 25 30

Gly Gly Val Ala Leu Pro Phe Ile Leu Val Gln Thr Arg Pro Gln Ala  
                   35                                  40                  45  
 Thr Val Glu Ile Glu Ile Ser Glu Asp Met Gln Leu Val His Phe Asp  
           50                                  55                  60  
 Phe Asn Ser Thr Pro Phe Glu Leu His Asp Asp Ala Tyr Val Leu Lys  
   65                                  70                  75                  80  
 Ala Met Gly Phe Cys Glu Lys Pro Phe Thr Asp Gly Met Asp Val Thr  
                   85                                  90                  95  
 Gly His Asp Ser Phe Ala Asn Gly Thr Gly Phe Gly Glu Asn Asn Met  
                   100                                  105                  110  
 Thr Ile Thr Asn Met  
                   115

&lt;210&gt; 1032

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1032

Thr Arg Val Leu Leu Ile Asp Asp His Pro Leu Phe Arg Glu Gly Leu  
   1                                  5                  10                  15  
 Ala Gly Ala Ile Gln Ala Glu Pro Asp Phe Glu Val Val Gly Gln Ala  
                   20                                  25                  30  
 Gly Thr Val Asp Glu Leu Arg Gly Leu Ala Pro Gln Ile Glu Pro Asp  
           35                                  40                  45  
 Val Ala Ile Val Asp Leu Leu Met Pro Ser Val Ser Gly Ile Gly Val  
   50                                  55                  60  
 Thr Arg Glu Leu Cys Glu Leu Leu Pro Arg Cys Arg Val Leu Gly Leu  
  65                                  70                  75                  80  
 Ser Ala Val Val Asp Ala Ala Ala Ile Ala Glu Met Leu Arg Ala Gly  
                   85                                  90                  95  
 Ala Ser Gly Phe Ala Leu Lys Thr Gln Pro Ala Pro Asp Ile Leu Asp  
                   100                                  105                  110  
 Ala Val Arg Arg Thr Val Ala Gly Glu Ser Tyr Leu Pro Pro Ser Val  
                   115                                  120                  125  
 Ser Arg Glu Ala Ile Asp Ala Glu Leu Ala Gly Gly Ala Pro Pro Ser  
                   130                                  135                  140  
 Leu Ala  
 145

&lt;210&gt; 1033

&lt;211&gt; 181

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1033

Met Ser Ile Leu Pro Lys Ser Asp Ser Ile His Ile Arg Glu Val Trp  
   1                                  5                  10                  15  
 Ala Asp Asn Leu Glu Glu Glu Phe Asn Leu Ile Arg Glu Ile Val Asp  
                   20                                  25                  30  
 Asp Tyr Pro Leu Ile Ala Met Asp Thr Glu Phe Pro Gly Ile Val Val  
           35                                  40                  45  
 Arg Pro Val Gly Lys Phe Arg Thr Val Gln Glu Tyr Asn Tyr Glu Thr  
   50                                  55                  60  
 Leu Arg Ser Asn Val Asp Val Leu Lys Leu Ile Gln Leu Gly Leu Thr  
  65                                  70                  75                  80  
 Phe Ser Asp Glu Asp Gly Asn Leu Pro Asn Cys Gly Thr Asp Arg Tyr  
                   85                                  90                  95  
 Cys Val Trp Gln Phe Asn Phe Arg Glu Phe Asn Ile Trp Glu Asp Ala  
                   100                                  105                  110  
 Tyr Ala Ser Asp Ser Ile Glu Leu Leu Arg Gln Ser Gly Ile Asp Phe

```

      115      120      125
Lys Lys Asn Ser Glu Arg Gly Val Asp Ser His Leu Phe Ala Glu Leu
      130      135      140
Leu Met Ser Ser Gly Ile Val Leu Asn Glu Asn Val Arg Trp Ile Thr
145      150      155
Phe His Ser Gly Tyr Asp Phe Gly Tyr Leu Leu Lys Leu Val Met Asn
      165      170      175
Arg Ser Leu Pro Pro
      180

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<210> 1034
<211> 122
<212> PRT
<213> Pinus radiata

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      <400> 1034
Glu His Ala Cys Pro Met Ala Cys His Pro Gly Pro Cys Pro Pro Cys
1      5      10      15
Leu Val Ser Val Ser Lys Ser Cys Trp Cys Gly Ser Lys Thr Leu Val
      20      25      30
Ser Arg Cys Ser Val Leu Asn Lys Gly Thr Ser Thr Asn Ala Gly Val
      35      40      45
Gly Pro Val Leu Ser Cys Gly Gln Pro Cys Gly Arg Leu Leu Gly Cys
50      55      60
Glu Lys His Thr Cys Glu Gln Glu Cys His Pro Gly Pro Cys Pro Pro
65      70      75      80
Cys Asp Ile Val Asp Val Ala Lys Cys Tyr Cys Gly Arg Gln Glu Arg
      85      90      95
Gly Met Ala Cys Gly Thr Gly Ile Val Glu Thr Cys Val Val Glu Gly
      100      105      110
Glu Gly Ser Trp Glu Gly Arg Trp Gln Cys
      115      120

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<210> 1035
<211> 158
<212> PRT
<213> Pinus radiata

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      <400> 1035
Met Arg Ile Asn Glu Ala Thr Pro Lys Lys Ser Leu Gly Phe Gln Gln
1      5      10      15
Pro Tyr Ser Met Lys Gly Asn Tyr Tyr Thr Gln Ala Tyr Gly Gly Ala
      20      25      30
Val Ala Ser Gln Ala Phe Gln Ser Asp Asn Asp Pro Asn Asn Thr Thr
      35      40      45
Ile Phe Val Gly Gly Leu Asp Pro Asn Ala Thr Asp Glu Asp Leu Arg
50      55      60
Gln Val Phe Gly Pro Tyr Gly Glu Ile Val Tyr Val Lys Ile Pro Val
65      70      75      80
Gly Lys Gly Cys Gly Phe Val Gln Phe Thr Asn Arg Ser Ser Ala Glu
      85      90      95
Glu Ala Leu Gln Lys Leu His Gly Thr Val Ile Gly Gln Gln Ser Ile
      100      105      110
Arg Leu Ser Trp Gly Arg Ser Pro Ala Asn Lys Gln Thr Ala Ser Trp
      115      120      125
Gly Val Gln Pro Gln Ala Asp Pro Asn Gln Trp Asn Gly Gly Gly Ala
      130      135      140
Tyr Tyr Gly Tyr Gly Gln Gly Tyr Glu Ala Tyr Gly Tyr Ala
145      150      155

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<210> 1036

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<211> 126  
 <212> PRT  
 <213> Pinus radiata

<400> 1036  
 Gln Tyr Leu Ser Pro Gly Lys Ser Ala Pro Phe Trp Leu Cys Gln Asp  
 1 5 10 15  
 Met Ala Ile Thr Ser Gln Gln His His Met Asn Ala Leu Pro Tyr Asn  
 20 25 30  
 Glu Arg Ser Glu Lys Arg Pro Lys Phe Lys Gly Ile Arg Met Arg Lys  
 35 40 45  
 Trp Gly Ser Trp Gly Ser Glu Ile Arg Met Pro Lys Thr Arg Thr Lys  
 50 55 60  
 Ile Trp Leu Gly Ser Tyr Glu Thr Ala Glu Gln Ala Ala Arg Ala Tyr  
 65 70 75 80  
 Asp Ala Ala Leu Tyr Cys Leu Arg Gly Pro Asn Ala Lys Phe Asn Phe  
 85 90 95  
 Pro Asp Thr Val Pro Ser Ile Pro Ser Ala Phe Ser Leu Ser Arg His  
 100 105 110  
 Gln Ile Gln Leu Ala Ala Ala Arg Tyr Ala Arg Asp Glu Leu  
 115 120 125

<210> 1037  
 <211> 79  
 <212> PRT  
 <213> Pinus radiata

<400> 1037  
 Met Glu Pro Met Asp Ile Val Gly Lys Ser Lys Asp Asp Val Ser Leu  
 1 5 10 15  
 Pro Lys Ala Thr Met Phe Lys Ile Ile Lys Glu Met Leu Pro Pro Asp  
 20 25 30  
 Val Arg Val Ala Arg Asp Ala Gln Asp Leu Leu Val Glu Cys Cys Val  
 35 40 45  
 Glu Phe Ile Asn Leu Ile Ser Ser Glu Ser Asn Glu Val Cys Gly Arg  
 50 55 60  
 Glu Glu Lys Arg Thr Ile Ala Pro Glu His Val Leu Arg Ala Leu  
 65 70 75

<210> 1038  
 <211> 132  
 <212> PRT  
 <213> Pinus radiata

<400> 1038  
 Glu Ile Ser Leu Phe Trp Leu Gln Ser Phe Cys Lys Leu Pro Asn Met  
 1 5 10 15  
 Glu Asn Val Pro Glu Gln Glu Pro Asp Asn Thr Ile Ser Leu Pro His  
 20 25 30  
 Glu Asp Arg Gly Ser Arg Gln Phe Lys Gly Ile Arg Leu Arg Lys Trp  
 35 40 45  
 Gly Ser Trp Val Ser Glu Ile Arg Met Pro Arg Ser Arg Lys Lys Ile  
 50 55 60  
 Trp Leu Gly Ser Tyr Thr Thr Pro Glu Gln Ala Ala Arg Ala Tyr Asp  
 65 70 75 80  
 Ala Ala Val Tyr Cys Leu Arg Gly Arg Asn Ala Glu Phe Asn Phe Ser  
 85 90 95  
 Val Pro Asp Ile Pro Thr Ala Ser Pro Leu Ser Arg Glu Gln Ile Gln  
 100 105 110  
 His Ala Ala Ala Glu Tyr Ala Leu Gly Lys Ala Pro Ser Ser Phe Pro  
 115 120 125

Ser Phe Ala Gly  
130

<210> 1039  
<211> 241  
<212> PRT  
<213> Pinus radiata

<400> 1039  
Met Asn Glu Pro Asp Glu His Ala Ala Ala Gln Leu Val Gln Lys Arg  
1 5 10 15  
Ser His Pro Leu Ala Glu Val Val Met Pro Ile Ser Val Arg Pro Leu  
20 25 30  
Ala Glu Lys Cys Gly Val Glu Ala Glu Glu Glu Arg Lys Arg Ala Ala  
35 40 45  
Glu His Lys Lys Gln Arg Ser Lys Asn Trp Thr Arg Ala Glu Thr Leu  
50 55 60  
Lys Leu Ile Arg Leu Arg Ala Glu Met Glu Pro Arg Phe Ala Arg Ser  
65 70 75 80  
Gly Arg Lys Ser Glu Leu Trp Glu Glu Ile Ala Glu Ala Leu Arg Arg  
85 90 95  
Glu Ser Val Val Arg Asp Ala Gln Arg Cys Arg Asp Lys Trp Glu Lys  
100 105 110  
Leu Thr Ala Ser Tyr Lys Glu Val Arg Asp Gly Gln Arg Asp Arg Gln  
115 120 125  
Asp Phe Pro Phe Phe Asp Glu Leu Asp Pro Leu Leu Ser Leu Lys Pro  
130 135 140  
Gln Lys Ala Ala Ala Ala Ala Ala Ala Ala Ala Thr Ala Ala Thr Ala  
145 150 155 160  
Ala Asn Phe Val Ser Ala Glu Thr Pro Ser Asn Phe Pro Thr Asp Asp  
165 170 175  
Glu Met Thr Glu Glu Gly Ser Pro Ala Gly Lys Arg Arg Lys Thr Thr  
180 185 190  
Pro Arg Gly Leu Ser Ala Thr Asp Leu Asp Ala Val Arg Glu Leu Leu  
195 200 205  
Glu Ser Leu Val Ser Arg Gln Gln Arg Phe Phe Val Asp Leu Leu Asp  
210 215 220  
Ser Met Glu Arg Lys Glu Glu Ile Arg Glu Arg Ile Arg Gln Glu Lys  
225 230 235 240  
Glu

<210> 1040  
<211> 182  
<212> PRT  
<213> Pinus radiata

<400> 1040  
Met Val Tyr Ile Val Leu Leu Asp Leu Cys Glu Ser Val Gln Pro Pro  
1 5 10 15  
Gln Gly Ser Leu Gln Glu Phe Ser Asn Ser Ile Gln Glu Glu Gln Ala  
20 25 30  
Met Val Asp Leu Met Pro Lys Asp Ser Arg Gln Thr Met Ile Asn Asn  
35 40 45  
Thr Thr Ile Phe Val Gly Arg Leu Asp Pro Asn Ala Thr Asp Glu Asp  
50 55 60  
Leu Arg Gln Val Phe Gly Gln Tyr Gly Asp Leu Val Ser Ile Lys Ile  
65 70 75 80  
Pro Val Gly Lys Gly Cys Gly Phe Val Gln Phe Ala Asn Arg Ala Cys  
85 90 95  
Ala Glu Glu Ala Leu Gln Arg Leu His Gly Thr Val Ile Arg Gln Gln



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      100      105      110
Thr Ile Arg Leu Ser Trp Gly Arg Ser Pro Ala Asn Lys Gln Asn Ser
      115      120      125
Gln Pro Gln Gly Gln Gln Pro Gln Ser Asp Pro Asn Gln Trp Asn Gly
      130      135      140
Ala Tyr Tyr Gly Gln Gly Tyr Glu Ser Tyr Gly Tyr Ala Pro Pro Pro
145      150      155      160
Gln Asp Pro Ala Met Tyr Ala Tyr Gly Gly Tyr Pro Gly Tyr Gly Asn
      165      170      175
Tyr Asn Gln Gln Val Ser
      180

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<210> 1041
<211> 66
<212> PRT
<213> Pinus radiata

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<400> 1041
Thr Ser Tyr His Arg Pro Cys Phe Lys Cys Cys His Gly Gly Cys Val
 1      5      10      15
Ile Ser Pro Ser Asn Tyr Val Ala His Glu Gly Arg Leu Tyr Cys Arg
      20      25      30
His His Ser Ser Gln Leu Phe Arg Glu Lys Gly Asn Phe Ser Gln Leu
      35      40      45
Ser Lys Ala Thr Pro Thr Lys Gly Val Thr Glu Asn Ser Asp Thr Asp
      50      55      60
Asp Lys
65

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<210> 1042
<211> 152
<212> PRT
<213> Pinus radiata

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<400> 1042
Val Gly Gly Gly Gly Gly Gly Lys Gly Ser Pro Tyr Arg Gly Val Arg
 1      5      10      15
Met Arg Lys Trp Gly Lys Trp Val Ser Glu Val Arg Glu Pro Asn Lys
      20      25      30
Arg Ser Arg Ile Trp Leu Gly Ser Tyr Ser Thr Pro Glu Ala Ala Ala
      35      40      45
Arg Ala Tyr Asp Thr Ala Val Phe Tyr Leu Arg Gly Pro Ser Ala Thr
      50      55      60
Leu Asn Phe Pro Glu Glu Ala Arg Lys Glu Gln Gln Ser Asp Leu Arg
      65      70      75      80
Leu Ser Gln Leu Gly Glu Leu Ser Pro Ser Ser Ile Gln Arg Arg Ala
      85      90      95
Ala Glu Val Gly Ala Ala Val Asp His Ala Met Gln Ala Gly Pro Val
      100      105      110
Pro Ala Gln Thr Leu Arg Glu Ile Asn Gln Glu Asn Asp Met Lys Asn
      115      120      125
Ala Leu Ser Ser Lys Leu Ser Glu Gly Asn Asn Phe Lys Ile Glu Ala
      130      135      140
Lys Asn Asn Met Arg Gln Gln Gly
145      150

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<210> 1043
<211> 193
<212> PRT
<213> Pinus radiata

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<400> 1043  
 Met Ala Phe Ala Gly Thr Thr Gln Lys Cys Lys Ala Cys Glu Lys Thr  
 1 5 10 15  
 Val Tyr Leu Val Asp Gln Leu Thr Ala Asp Asn Ser Val Phe His Lys  
 20 25 30  
 Ser Cys Phe Arg Cys His His Cys Asn Gly Thr Leu Lys Leu Ser Asn  
 35 40 45  
 Tyr Ser Ser Phe Glu Gly Val Leu Tyr Cys Lys Pro His Phe Asp Gln  
 50 55 60  
 Leu Phe Lys Arg Thr Gly Ser Leu Asp Lys Ser Phe Glu Ala Ile Pro  
 65 70 75 80  
 Arg Ala Ser Arg Asn Asp Lys Met His Glu Asn Glu Asn Arg Thr Pro  
 85 90 95  
 Ser Arg Val Ser Ala Leu Phe Ser Gly Thr Gln Asp Lys Cys Val Ala  
 100 105 110  
 Cys Gly Lys Thr Val Tyr Pro Ile Glu Lys Val Ala Val Asp Gly Thr  
 115 120 125  
 Ser Tyr His Arg Pro Cys Phe Lys Cys Cys His Gly Gly Cys Val Ile  
 130 135 140  
 Ser Pro Ser Asn Tyr Val Ala His Glu Gly Arg Leu Tyr Cys Arg His  
 145 150 155 160  
 His Ser Ser Gln Leu Phe Arg Glu Lys Gly Asn Phe Ser Gln Leu Ser  
 165 170 175  
 Lys Ala Thr Pro Thr Lys Gly Val Thr Glu Asn Ser Asp Thr Asp Asp  
 180 185 190  
 Lys

<210> 1044  
 <211> 121  
 <212> PRT  
 <213> Pinus radiata

<400> 1044  
 Met Val Lys Pro Leu Pro Lys Gln Ser Ser Pro Ser Gly Ser Glu Asn  
 1 5 10 15  
 Cys Gln Ile Lys Ser Arg Gln Phe Lys Gly Ile Arg Leu Arg Lys Trp  
 20 25 30  
 Gly Lys Trp Val Ser Glu Ile Arg Met Pro Asn Ser Arg Ala Lys Ile  
 35 40 45  
 Trp Leu Gly Ser Tyr Asp Ser Pro Glu Lys Ala Ala Arg Ala Tyr Asp  
 50 55 60  
 Phe Ala Leu Tyr Cys Leu Arg Gly Ser Lys Ala Thr Phe Asn Phe Pro  
 65 70 75 80  
 Asp Ser Pro Pro Glu Ile Pro Cys Ala Ser Asp Leu Ser Pro Pro Gln  
 85 90 95  
 Ile Gln Ala Ala Ala Ala Arg Phe Ala Thr Glu Asp Phe Arg Leu Pro  
 100 105 110  
 Ser Glu Glu Asp Ala Ala Ser Ser Ser  
 115 120

<210> 1045  
 <211> 131  
 <212> PRT  
 <213> Pinus radiata

<400> 1045  
 Met Glu Ile Arg Leu Gln Gln Glu Asn Asp Gln Asp Ile Ala Pro Pro  
 1 5 10 15  
 His Glu Asp Arg Val Ser Arg Gln Phe Lys Gly Val Arg Pro Arg Lys  
 20 25 30

Trp Gly Ile Trp Val Ser Glu Ile Arg Met Pro Arg Ser Arg Gln Lys  
           35                          40                          45  
 Ile Trp Leu Gly Ser Tyr Lys Lys Pro Glu Gln Ala Ala Arg Ala Tyr  
       50                          55                          60  
 Asp Ala Ala Val Tyr Cys Leu Arg Gly Ser Asn Ala Lys Phe Asn Phe  
       65                          70                          75                          80  
 Pro Asn Ser Val Pro Asp Ile Pro Ser Ala Ser Ser Leu Ser Arg Gln  
                           85                          90                          95  
 Gln Ile Gln Leu Ala Ala Ala Lys Tyr Ala Leu Asp Gln Ser Pro Ser  
                           100                          105                          110  
 Ser Pro Pro Ser Leu Asn Asn Asn Lys Glu Glu Pro Ala Ser Pro Ser  
                           115                          120                          125  
 Gln Ser Ser  
       130

<210> 1046  
 <211> 102  
 <212> PRT  
 <213> Pinus radiata

<400> 1046  
 Met Thr Gln Gln Thr Thr Ser Pro Thr Val Ser Pro Ala Ala Leu Ala  
       1                          5                          10                          15  
 Leu Pro Thr Ser Ala Ser Ser Thr Ser Ala Lys Ser Ala Ala Val Pro  
                           20                          25                          30  
 Val Pro Ala Gln Ala Asn Pro Arg Lys Arg Pro Arg Ser Asp Leu Ser  
                           35                          40                          45  
 Ala Glu Glu Lys Arg Glu Ala Arg Ala His Arg Asn Arg Ile Ala Ala  
                           50                          55                          60  
 Gln Asn Ser Arg Asp Lys Arg Lys Gln Gln Phe Thr Ser Leu Glu Gln  
       65                          70                          75                          80  
 Arg Val Ile Asp Leu Glu Asn Glu Asn Arg Gln Leu Arg Asp Ala Leu  
                           85                          90                          95  
 Ala Thr Ser Gln Pro Asn  
                           100

<210> 1047  
 <211> 66  
 <212> PRT  
 <213> Pinus radiata

<400> 1047  
 Leu Leu Thr Ile Phe Glu Ala Val Tyr Val His Lys Gly Ile Val Asn  
       1                          5                          10                          15  
 Ala Ala Lys Val Leu Asn Leu Thr Pro Ser Ala Ile Ser Gln Ser Ile  
                           20                          25                          30  
 Gln Lys Leu Arg Val Ile Phe Pro Asp Pro Leu Phe Ile Arg Lys Gly  
                           35                          40                          45  
 Gln Gly Val Thr Pro Thr Ala Phe Ala Met His Leu His Glu Tyr Ile  
                           50                          55                          60  
 Ser Gln  
       65

<210> 1048  
 <211> 106  
 <212> PRT  
 <213> Pinus radiata

<400> 1048  
 Met Lys Gly Pro Gln Gly Ile Ser Asn Ala Gln Asn Thr Cys Thr Lys  
       1                          5                          10                          15

Phe Arg Met Pro Thr Ser Glu Asn Leu Ile Pro Ile Arg Leu Asp Ile  
                   20                  25                  30  
 Glu Ile Asp Gly Leu Arg Leu Lys Asp Ala Phe Thr Trp Asn Val Asn  
                   35                  40                  45  
 Asp Pro Asp Ser Glu Ile His Leu Phe Ala Arg Arg Thr Ile Lys Asp  
                   50                  55                  60  
 Leu Lys Tyr Pro Gly Ser Phe Ile Thr Pro Val Val Gln Ser Ile Gln  
 65                  70                  75                  80  
 Ala Gln Leu Ala Glu Phe Arg Ser Phe Glu Gly Gln Glu Met Asn Thr  
                   85                  90                  95  
 Gly Gln Lys Val Leu Pro Leu Lys Leu Pro  
                   100                  105

&lt;210&gt; 1049

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1049

Met Glu Gly Ser Gln Asn Gly Ser Ser Asn Ala Pro Pro Pro Phe Leu  
 1                  5                  10                  15  
 Thr Lys Thr Tyr Asp Met Val Asp Asp Pro Ala Thr Asn Ala Met Val  
                   20                  25                  30  
 Ser Trp Ser Pro Gly Ser Asn Ser Phe Ile Val Trp Asn Pro Thr Glu  
                   35                  40                  45  
 Phe Ser Arg Val Leu Leu Pro Thr Tyr Phe Lys His Ser Asn Phe Ser  
                   50                  55                  60  
 Ser Phe Val Arg Gln Leu Asn Thr Tyr Gly Phe His Lys Ile Asp Pro  
 65                  70                  75                  80  
 Glu Arg Trp Glu Phe Ala Asn Glu Gly Phe Leu Arg Gly His Arg His  
                   85                  90                  95  
 Leu Leu Lys Asn Ile His Arg Arg Lys Pro Val His Ser His Ser Gln  
                   100                  105                  110  
 Gln Lys Gly Glu Ser Leu Ser Gly Gly Ser Cys Val Glu Ile Lys Gln  
                   115                  120                  125  
 Leu Glu Asp Glu Thr Glu  
 130

&lt;210&gt; 1050

&lt;211&gt; 220

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1050

Met Val Leu Tyr Glu Leu Leu His Val Gln Gln Ile Gln Gln Ile Gln  
 1                  5                  10                  15  
 Gln Gln Gln Phe Gln Leu Gln Gln Gln Gln Ile Ala Ala Ala Ala Ser  
                   20                  25                  30  
 Ile His His Met Gly Arg Asn Pro Leu Gly Pro Arg Asp Gln Pro Met  
                   35                  40                  45  
 Lys Leu His Gly Ser Ser Leu Ser Lys Pro Ala Lys Leu Tyr Arg Gly  
                   50                  55                  60  
 Val Arg Gln Arg His Trp Gly Lys Trp Val Ala Glu Ile Arg Leu Pro  
 65                  70                  75                  80  
 Arg Asn Arg Thr Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala Glu Glu  
                   85                  90                  95  
 Ala Ala Met Ala Tyr Asp Lys Ala Ala Tyr Arg Leu Arg Gly Asp Tyr  
                   100                  105                  110  
 Ala Arg Leu Asn Phe Pro His Leu Lys His His Leu Glu Ala Asn Ser  
                   115                  120                  125  
 Phe Ala Pro Trp Thr Gly Asn Ser Val Leu Pro Ser Ser Val Asp Ala

130		135		140											
Lys	Leu	Gln	Ala	Ile	Cys	Gln	Ser	Leu	Lys	Gln	Pro	Leu	Glu	Ser	Met
145		150		155		160									
Ser	Lys	Thr	Glu	Glu	Ser	Glu	Glu	Ile	Ser	Cys	Ala	Tyr	Glu	Asn	Ser
		165		170		175									
Gly	Ser	Leu	Gly	Ser	Val	Arg	Asp	Glu	Asp	Ala	Lys	Lys	Asn	Asp	Val
		180		185		190									
Val	Ser	Val	Lys	Ser	Glu	Thr	Cys	Asp	Ser	Asp	Ser	Ser	Asp	Asp	Ser
		195		200		205									
Thr	Ile	Thr	Ala	Leu	Asn	Ser	Ser	Gly	Asp	Gln	Asn				
210		215		220											

&lt;210&gt; 1051

&lt;211&gt; 219

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

<400> 1051															
Arg	Ile	Glu	Ala	Pro	Gly	Arg	Arg	Thr	Asn	Pro	Ala	Ala	Val	Thr	Trp
1		5		10		15									
Ala	Ala	Ala	His	Phe	Ser	Val	Lys	Glu	Gln	Asp	Arg	Phe	Leu	Pro	Ile
		20		25		30									
Ala	Asn	Val	Gly	Arg	Ile	Met	Lys	Lys	Ala	Leu	Pro	Ala	Asn	Gly	Lys
		35		40		45									
Val	Ser	Lys	Asp	Ala	Lys	Glu	Thr	Val	Gln	Glu	Cys	Val	Ser	Glu	Phe
		50		55		60									
Ile	Ser	Phe	Ile	Thr	Gly	Glu	Ala	Ser	Asp	Lys	Cys	Gln	Arg	Glu	Lys
65		70		75		80									
Arg	Lys	Thr	Ile	Asn	Gly	Asp	Asp	Leu	Leu	Trp	Ala	Met	Thr	Thr	Leu
		85		90		95									
Gly	Phe	Glu	Asp	Tyr	Val	Glu	Pro	Leu	Lys	Ile	Tyr	Leu	His	Lys	Tyr
		100		105		110									
Arg	Glu	Met	Glu	Gly	Glu	Lys	Val	Ser	Met	Ala	Lys	Gln	Gly	Asp	Pro
		115		120		125									
Thr	Pro	Ser	Lys	Glu	Gly	Asn	Asn	Ala	Ile	Asn	Gly	Ser	Ser	Ile	Glu
		130		135		140									
Asn	Pro	Asn	Ala	Asn	Ala	Tyr	Ser	Gly	Leu	Asn	Pro	Gly	Gly	Tyr	Asn
145		150		155		160									
Arg	Val	Gln	Ser	Gln	Ser	Leu	Pro	His	Met	Gln	Gln	Ala	Ala	Tyr	Gly
		165		170		175									
Gln	Pro	Pro	Gly	Gly	Met	Val	Tyr	Gly	His	His	Gly	His	Ile	Met	Gly
		180		185		190									
Ala	Tyr	Asn	Met	Thr	Ala	Pro	Asn	Ser	Ser	Gly	Gly	Asn	Ser	Ser	Gly
		195		200		205									
Gln	Gln	Gln	Gln	Gln	Ala	Pro	Arg	Gly	Gln	Trp					
210		215													

&lt;210&gt; 1052

&lt;211&gt; 100

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

<400> 1052															
Gly	Cys	Thr	Thr	Val	Val	Glu	Thr	Leu	Ala	Lys	Trp	Gln	Glu	Leu	Asn
1		5		10		15									
Ser	Gln	Val	Glu	Ser	Ser	Lys	Asp	Gly	Ala	Lys	Arg	Leu	Arg	Lys	Ala
		20		25		30									
Pro	Ala	Lys	Gly	Ser	Lys	Lys	Gly	Cys	Met	Lys	Gly	Lys	Gly	Gly	Pro
		35		40		45									
Asp	Asn	Gly	Arg	Cys	Asn	Tyr	Arg	Gly	Val	Arg	Gln	Arg	Thr	Trp	Gly
		50		55		60									

Lys Trp Val Ala Glu Ile Arg Glu Pro Asn Arg Gly Ser Arg Leu Trp  
 65 70 75 80  
 Leu Gly Thr Phe Ser Ser Ala Glu Glu Ala Ala Arg Ala Tyr Asp Gln  
 85 90 95  
 Ala Ala Arg Val  
 100

<210> 1053  
 <211> 117  
 <212> PRT  
 <213> Pinus radiata

<400> 1053  
 Met Glu Ile Val Gly Lys Ala Lys Glu Asp Val Ser Leu Pro Lys Ala  
 1 5 10 15  
 Thr Met Thr Lys Ile Ile Lys Glu Met Leu Pro Ala His Val Arg Val  
 20 25 30  
 Thr Arg Asp Ala Gln Asp Leu Leu Val Glu Cys Cys Val Glu Phe Ile  
 35 40 45  
 Asn Leu Ile Ser Ser Glu Ser Asn Asp Ile Cys Tyr Lys Glu Glu Lys  
 50 55 60  
 Arg Thr Ile Ala Pro Glu His Val Leu Glu Ser Leu Lys Ile Leu Gly  
 65 70 75 80  
 Phe Gly Ser Tyr Ile Arg Glu Val Lys Ala Ala Tyr Glu Gln His Arg  
 85 90 95  
 Ile Glu Asn Trp Asp Cys Pro Arg Ala Gly Thr Arg Trp Ser Lys Asn  
 100 105 110  
 Arg Leu Glu Met Thr  
 115

<210> 1054  
 <211> 161  
 <212> PRT  
 <213> Pinus radiata

<400> 1054  
 Asn Ile Asn Gly Val Ala Gly Gly Val Ala Lys Glu Lys Lys Val Asn  
 1 5 10 15  
 Phe Pro Trp Cys Ala Leu Glu Lys Gln Val Gly Thr Ser Ser Phe Asp  
 20 25 30  
 Pro Asn Leu Ala Ser Ser Lys Gln Ala Met Asp Ser Leu Ile Met Gln  
 35 40 45  
 Gln Leu Pro Thr Phe Leu Gln Tyr Cys Lys Asp Leu Glu Glu Gly Arg  
 50 55 60  
 Gln Ser Trp Phe Met His Lys Lys Glu Ala Thr Trp Arg Leu Ser Arg  
 65 70 75 80  
 Leu Glu Gln Gln Leu Glu Ser Glu Lys Ala Arg Lys Arg Arg Glu Lys  
 85 90 95  
 Ile Glu Glu Val Gly Ser Lys Ile Arg Ala Leu Arg Glu Glu Ile  
 100 105 110  
 Thr Tyr Leu Asp Lys Leu Glu Thr Glu Cys Arg Glu Gln Leu Ser Ser  
 115 120 125  
 Leu Gln Arg Asp Ala Glu Met Lys Glu Ala Lys Met Met Glu Leu Trp  
 130 135 140  
 Ala Thr Lys His Leu Gln Leu Thr Lys Phe Val Asp Ser Ala Leu Ser  
 145 150 155 160  
 Val

<210> 1055  
 <211> 396

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1055

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Met Ala Arg Glu Thr Asn Ser Phe Ala Leu Leu Gly Gly Asp Asp Asp
 1           5           10           15
Gln Gly Asp Asp Asp Leu Met Ala Leu Ile Asn Ser Ala Ala Thr Leu
          20           25           30
Lys Pro Glu Lys Lys Pro Lys Thr Thr Ala Lys Lys Asn Gly Gln Gln
          35           40           45
Gln Pro Pro Pro Pro Gln Ser Gln Pro Ala Lys Leu Pro Ser Lys Pro
          50           55           60
Leu Pro Pro Ala Glu Ala Val Arg Ala Asp Arg Gly Arg Gly Arg Gly
65           70           75           80
Gly Arg Gly Arg Gly Gly Gly Arg Gly Ser Arg Phe Glu Gly Gly Glu
          85           90           95
Tyr Asn Thr Glu Ser Asn Gly Tyr Gly Gly Gly Gly Gly Phe Gly Gly
          100          105          110
Gly Arg Gly Trp Gly Arg Asp Glu Asp Ser Gly Asn Arg Gly Trp Gly
          115          120          125
Arg Glu Glu Asp Thr Gly Gly Arg Gly Trp Gly Arg Ser Asn Gly Glu
          130          135          140
Glu Asp Thr Gly Gly Arg Gly Trp Ser Arg Ser Asn Gly Glu Asp Asp
145          150          155          160
Ala Ala Ala Gly Gly Gln Ser Arg Gly Arg Gly Arg Gly Arg Gly
          165          170          175
Arg Gly Arg Gly Phe Gly Gly Arg Gly Ser Gly Arg Phe Gly Gly Gly
          180          185          190
Gly Asp Ser Tyr Gly Tyr Asp Ala Asn Gly Gln Asp Arg Pro Pro Arg
          195          200          205
Gln Gln Phe Glu Asp Thr Asn Thr Phe Thr Gly Thr Asp Asn Trp Asp
          210          215          220
Thr Pro Glu Val Ser Val Val Asp Glu Ala Lys Asn Val Glu Pro Glu
225          230          235          240
Gln Lys Lys Pro Glu Glu Glu Ala Thr Pro Gly Val Thr Ser Glu Asn
          245          250          255
Lys Asp Asn Lys Glu Glu Glu Asp Asn Glu Met Thr Leu Asp Glu Tyr
          260          265          270
Glu Lys Leu Leu Asn Glu Lys Arg Lys Thr Leu Glu Ala Leu Lys Asn
          275          280          285
Ala Glu Arg Lys Val Ile Leu Asp Arg Asp Phe Glu Lys Met Gln Leu
          290          295          300
Val Asp Lys Lys Asn Asp Gly Ile Phe Ile Lys Leu Asn Ser Glu Lys
305          310          315          320
Glu Arg Gln Arg Lys Lys Glu Thr Leu Glu Lys Glu Glu Arg Ala Arg
          325          330          335
Lys Ser Val Ser Ile Asn Glu Phe Leu Lys Pro Ala Asp Gly Glu Arg
          340          345          350
Tyr Phe Thr Pro Ser Gly Thr Arg Gly Arg Gly Arg Gly Arg Gly Arg
          355          360          365
Gly Arg Gly Asp Gly Val Ser Thr Arg Gly Gly Phe Gly Gly Arg Tyr
          370          375          380
Ser Asp Ala Asp Gln Val Ala Ala Pro Cys Ile Glu
385          390          395

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&lt;210&gt; 1056

&lt;211&gt; 120

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1056

```

Thr Trp Ala Gln Glu Glu Lys Ser Pro Arg Ala Ile Gly Gly Glu
 1          5          10          15
Lys Gly Gly Arg Gly Leu Arg Gln Phe Ser Met Lys Val Cys Gln Lys
          20          25          30
Val Glu Ser Lys Gly Arg Thr Thr Tyr Asn Glu Val Ala Asp Glu Leu
          35          40          45
Val Ala Glu Tyr Ala Asn Pro Asn Ser Ala Leu Ile Ser Pro Asp Gln
          50          55          60
Gln Gln Tyr Asp Glu Lys Asn Ile Arg Arg Arg Val Tyr Asp Ala Leu
65          70          75          80
Asn Val Leu Met Ala Met Asp Ile Ile Ser Lys Asp Lys Lys Glu Ile
          85          90          95
Gln Trp Lys Gly Leu Pro Ser Thr Ser Pro Asn Asp Leu Glu Asp Leu
          100          105          110
Lys Ala Lys Arg Met Gly Leu Arg
          115          120

```

<210> 1057  
 <211> 78  
 <212> PRT  
 <213> Pinus radiata

```

<400> 1057
Pro Met Lys Leu Tyr Arg Gly Val Arg Gln Arg His Trp Gly Lys Trp
 1          5          10          15
Val Ala Glu Ile Arg Leu Pro Arg Asn Arg Thr Arg Leu Trp Leu Gly
          20          25          30
Thr Phe Asp Thr Ala Glu Asp Ala Ala Leu Ala Tyr Asp His Glu Ala
          35          40          45
Tyr Lys Leu Arg Gly Glu Asn Ala Arg Leu Asn Phe Pro His Leu Phe
          50          55          60
Leu Asn Lys Gly Ser Thr Ser Pro Lys Ala Cys Ser Val Ala
65          70          75

```

<210> 1058  
 <211> 171  
 <212> PRT  
 <213> Pinus radiata

```

<400> 1058
Ser Phe Ser Cys Arg Ile Arg His Gln Thr Glu Pro Thr Leu Ile Leu
 1          5          10          15
Ile Asp Thr Ala Gly Cys Asp Met Glu Glu Lys Lys Asp Asp Glu Asp
          20          25          30
Ser Thr Met Asn Glu Gly Glu Ala Thr Val Thr Leu Met His Ala Lys
          35          40          45
Lys Leu Leu Glu Ser Gly Val Asn Pro Ser Asp Ile Gly Ile Ile Thr
          50          55          60
Pro Tyr Ala Ala Gln Val Gly Leu Leu Lys Ile Met Arg Ser Lys Glu
65          70          75          80
Met Lys Leu Lys Asp Leu Glu Ile Ser Thr Val Asp Gly Phe Gln Gly
          85          90          95
Arg Glu Lys Glu Ala Ile Val Ile Ser Met Val Arg Ser Asn Ala Lys
          100          105          110
His Glu Val Gly Phe Leu Asn Asp Arg Arg Arg Met Asn Val Ala Val
          115          120          125
Thr Arg Ala Arg Arg Gln Cys Cys Ile Ile Cys Asp Thr Glu Thr Val
          130          135          140
Ser Ser Asp Lys Phe Leu Lys Arg Leu Val Glu Tyr Phe Glu Glu His
145          150          155          160
Ala Glu Tyr Leu Ser Ala Ser Glu Tyr Leu Thr

```



165

170

<210> 1059  
 <211> 94  
 <212> PRT  
 <213> Pinus radiata

<400> 1059  
 Glu Lys Cys Ser Asp Gln Val Ser Gly Ser Thr Ser Ser Cys Arg Ile  
 1 5 10 15  
 Arg His Glu Leu Gly Tyr Ser Arg Ser Ala Lys Arg Cys Lys Glu Lys  
 20 25 30  
 Trp Glu Asn Ile Asn Lys Tyr Phe Arg Lys Ala Lys Glu Ser Asn Lys  
 35 40 45  
 Lys Arg Pro Glu Asn Ala Lys Thr Cys Pro Tyr Phe His Gln Leu Asp  
 50 55 60  
 Ala Leu Tyr Lys Lys Arg Asn Leu Gly Asn Arg His Asn Lys Ile Met  
 65 70 75 80  
 Val Leu Ser Ile Phe Ser Val Ala Ser Thr Gly Leu Phe Met  
 85 90

<210> 1060  
 <211> 174  
 <212> PRT  
 <213> Pinus radiata

<400> 1060  
 Met Ala Pro Ser Asn Asn Arg Arg Asp Asp Asn Gly Ala Arg Gly Val  
 1 5 10 15  
 His Phe Arg Gly Val Arg Lys Arg Pro Trp Gly Arg Tyr Ala Ala Glu  
 20 25 30  
 Ile Arg Asp Pro Trp Lys Lys Val Arg Leu Trp Leu Gly Thr Phe Asp  
 35 40 45  
 Thr Ala Glu Glu Ala Ala Arg Ala Tyr Asp Thr Ala Ala Ile Ser Leu  
 50 55 60  
 Arg Gly Pro Lys Ala Lys Thr Asn Phe Ala Tyr Ser Ser Pro Ser Ser  
 65 70 75 80  
 Ser Ser Ser Leu His Asn Asn Gln Ser Ser Ser Gln Asn Ser Ser Thr  
 85 90 95  
 Val Glu Ser Trp Pro Ser Ala Ala Pro Val Thr Arg Ser Gly Asp Leu  
 100 105 110  
 Glu Leu Pro Ala Ser Phe Leu Pro Arg Leu Gly Val Ser Thr Gly Arg  
 115 120 125  
 Arg Val Leu Asn Gly Gly Asn Pro Arg Ser Gly Arg Arg Arg Ser Leu  
 130 135 140  
 Ser Glu Lys Asn Ser Gly Arg Lys Ala Glu Gly Ala Glu Ala Arg Thr  
 145 150 155 160  
 Thr Leu Ser Asp Ser Asp Ser Ser Ser Ser Ala Val Leu Asp  
 165 170

<210> 1061  
 <211> 121  
 <212> PRT  
 <213> Pinus radiata

<400> 1061  
 Met Gly Pro Leu Met Gly Ser Pro Leu Gly Gly Gly Leu Gly Leu Ser  
 1 5 10 15  
 Pro Arg Met Gly Gly Gly Ile Gly Asn Gly Leu Gln Gly Gly Leu Gly  
 20 25 30  
 Val Gly Leu Ala Gly Leu Gly Ala Thr Ala Leu Thr Ile Gly Ala Ala

```

      35      40      45
Ser Pro Ala Asn Gln Leu Ser Ser Asp Gly Met Gly Asn Ser His Gly
      50      55      60
Asp Asn Ser Thr Val Ser Pro Ile Pro Tyr Gly Leu Asp Val Ser Val
65      70      75      80
Arg Gly Arg Lys Arg Gly Gly Pro Val Glu Lys Val Val Glu Arg Arg
      85      90      95
Gln Arg Arg Met Ile Lys Asn Arg Glu Ser Ala Ala Arg Ser Arg Ala
      100      105      110
Arg Lys Gln Ala Tyr Thr Val Asn Trp
      115      120

```

<210> 1062  
 <211> 145  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 1062
Glu Thr Arg Gly Gly Ser Ser Gly Asp Phe Leu Pro Pro Pro Pro Thr
1      5      10      15
Thr Lys Cys Ser Glu Glu Leu Gln Asn Lys Ile Thr Lys Tyr Ile Ala
      20      25      30
Leu Lys Ser Ala Gly Arg Ser Phe Asn Lys Glu Leu Arg Asn Ser Lys
      35      40      45
Gly Tyr Arg Asn Pro Asp Phe Leu Gln Arg Ala Val Lys Tyr Gln Gly
      50      55      60
Ile Asp Gln Ile Gly Ser Cys Phe Lys Lys Glu Ile Phe Asp Pro His
65      70      75      80
Gly Tyr Asp Pro Ser Asp Tyr Tyr Asp Ala Leu Ala Leu Glu Leu Lys
      85      90      95
Arg Glu Phe Glu Arg Arg Glu Gln Glu Lys Gln Lys Asn Gln Arg Val
      100      105      110
Asp Phe Val His Gly Ala Val Gln Thr Thr Ser Val Gln Ser Val Ser
      115      120      125
Lys Pro Ile Val Gln Val Met Gly Gly Gln Lys Val Pro Val Val Gly
      130      135      140
Val
145

```

<210> 1063  
 <211> 236  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 1063
Met Ser Ser Pro Gln Ser Asn Lys Trp Leu Ser Tyr Phe Asp Glu Pro
1      5      10      15
Leu Leu Asp Asp Val Gly Val Gly Gln Pro Ala Asn Pro Phe Phe Trp
      20      25      30
Cys Gly Gln Gly Ile Asn Asp Gln Pro Asp Val Ser Val Glu Ile Asp
      35      40      45
Gly Pro Asn Lys Asp Met Asp Glu Gln Asp Lys Leu Cys Pro Arg Lys
      50      55      60
Arg Ser Arg Glu Glu Ser Ser Gly Gly Pro Gly Ser Lys Ala Cys Arg
65      70      75      80
Glu Lys Met Arg Arg Asp Arg Leu Asn Asp Arg Phe Met Glu Leu Ser
      85      90      95
Ser Val Leu Glu Pro Gly Arg Pro Pro Lys Thr Ala Asp Lys Ala Thr
      100      105      110
Ile Leu Ser Asp Ala Ala Arg Val Met Thr Gln Leu Arg Thr Glu Ala
      115      120      125

```

Gln Asn Leu Lys Ala Glu Asn Glu Arg Leu Gln Glu Ala Ile Lys Asp  
 130 135 140  
 Leu Lys Ala Glu Lys Asn Glu Leu Arg Asp Glu Lys Leu Arg Met Lys  
 145 150 155 160  
 Ala Glu Lys Glu Lys Leu Asp Gln Gln Val Lys Ala Met Ala Leu Pro  
 165 170 175  
 Thr Gly Phe Val Pro His Pro Ala Ala Phe His Ala Ala Ala Phe  
 180 185 190  
 Ala Ala Gln Ser Gln Ala Ala Ala Asn Lys Thr Met Pro Val Pro Gly  
 195 200 205  
 Tyr Pro Gly Met Ala Met Trp Gln Trp Met Pro Pro Ala Val Val Asp  
 210 215 220  
 Thr Ser Gln Asp His Val Leu Arg Pro Pro Val Ala  
 225 230 235

<210> 1064  
 <211> 145  
 <212> PRT  
 <213> Pinus radiata

<400> 1064  
 Met Gly Ser Arg Thr Met Leu Ser Ser Asn Gly Gly Arg Thr Pro Gln  
 1 5 10 15  
 Phe Gln Pro Leu Val Arg Gln Asn Ser Leu Tyr Asn Leu Thr Leu Glu  
 20 25 30  
 Glu Val Gln Asn Gln Leu Gly Asp Ala Ser Lys Pro Leu Ser Ser Met  
 35 40 45  
 Asn Met Asp Glu Leu Leu Lys Asn Ile Trp Thr Gln Glu Glu Ser Gln  
 50 55 60  
 Ala Ile Ser Met Ala Ile Gly Asn Gly Pro Met Asn Gly Val Pro Pro  
 65 70 75 80  
 Asn Ser Ala Pro Ala Ser Gly Gly Leu Gln Arg Gln Gly Ser Leu Thr  
 85 90 95  
 Ile Pro Arg Thr Leu Ser Arg Lys Thr Val Asp Glu Val Trp Arg Asp  
 100 105 110  
 Ile Gln Gln Ser Gln Gly Lys Ser Asn Glu Glu Lys Lys Pro Gln Gln  
 115 120 125  
 Arg Gln Ser Thr Phe Gly Glu Met Thr Leu Glu Asp Phe Leu Val Lys  
 130 135 140  
 Ala  
 145

<210> 1065  
 <211> 171  
 <212> PRT  
 <213> Pinus radiata

<400> 1065  
 Met Ala Ser Gly Asn Val Asp Pro Asp Gln Trp Glu Phe Ala Asn Glu  
 1 5 10 15  
 Asp Phe Leu Arg Gly Gln Arg Asn Leu Leu Lys Asn Ile His Arg Arg  
 20 25 30  
 Lys Pro Met His Ser His Ser Gln Asn Pro Gln Gln Gly Val Cys Asn  
 35 40 45  
 Asp Ala Ile Lys Tyr Glu Leu Glu Glu Glu Ile Gln Arg Leu Lys Arg  
 50 55 60  
 Asp Lys Gly Leu Leu Met Met Glu Leu Val Arg Ile Arg Gln Gln His  
 65 70 75 80  
 Gln Gly Thr Glu Met His Met Gln Thr Leu Glu Glu Arg Leu Gln Ala  
 85 90 95  
 Met Glu His Arg Gln Gln Gln Met Met Ala Phe Leu Ala Lys Ala Val

```

      100      105      110
Gln Lys Pro Gly Phe Val Ala Gln Leu Val Gln Gln Ser Glu Asn Asn
      115      120      125
Lys Leu Leu Glu Ala Ala Asn Lys Lys Arg Arg Leu Pro Lys Gln Glu
      130      135      140
Asn Cys Ser Glu Ala Gly Glu Thr Glu Leu Thr Asp Ser Gln Ile Val
145      150      155      160
Lys Tyr Gln Pro Ala Ser Gly Asp Glu Cys Ser
      165      170

```

<210> 1066  
 <211> 112  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 1066
Val Ala Ala Ala Ser Ala Ser Ala Ser Gly Thr Ala Val Ala Ala Ser
  1      5      10      15
Leu Pro Val Asn Gly Ala Ala Gly Val Arg Ser Ser Val Asp Ser Glu
      20      25      30
His Ser Asp Ile Glu Ala Ser Phe Lys Glu Ala Glu Cys Ser Gln Ala
      35      40      45
Ile Val Glu Arg Arg Pro Arg Lys Arg Gly Arg Lys Pro Ala Asn Gly
      50      55      60
Arg Glu Glu Pro Leu Asn His Val Glu Ala Glu Arg Gln Arg Arg Glu
      65      70      75      80
Lys Leu Asn Gln Arg Phe Tyr Ala Leu Arg Ala Val Val Pro Asn Val
      85      90      95
Ser Lys Met Asp Lys Ala Ser Leu Leu Gly Asp Ala Ile Ser Tyr Ile
      100      105      110

```

<210> 1067  
 <211> 73  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 1067
Leu Tyr Ala Glu Glu Ser Ser Thr Val Thr His Leu Gln Tyr Gln Gln
  1      5      10      15
Ser Ile Leu Glu Asn Asp Leu Arg Ser Lys Leu Lys Asp Asn Leu Gln
      20      25      30
Gln Pro Gln Asn Ser Gly Lys Lys Arg Arg Tyr Arg Gly Val Arg Gln
      35      40      45
Arg Pro Trp Gly Lys Trp Ala Ala Glu Ile Arg Asp Pro Lys Lys Ala
      50      55      60
Ala Arg Val Trp Leu Gly Thr Phe Asp
      65      70

```

<210> 1068  
 <211> 203  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 1068
Asn Met Ala Lys His Thr Val Cys Ala Ser Phe Leu Asn Glu Gly Asp
  1      5      10      15
Phe Ile Cys Pro Pro Tyr Glu Asp Gly Ile Gly Leu Glu Trp Leu Ser
      20      25      30
Asp Phe Val Glu Asp Ser Phe Ala Ala Thr Gly Ser Ser Asn Ser Gly
      35      40      45
Ser Leu Ala Asp Leu Ser Lys Asp Lys Ile Asp Asp Asn Arg Glu Lys

```

50						55						60					
Lys	Lys	Gln	Asn	Pro	Thr	Asp	Glu	Ala	Ile	Ile	Pro	Glu	Ile	Pro	Pro		
65						70					75				80		
Ile	Lys	Glu	Thr	Pro	Arg	Ser	Gln	Arg	Ala	Val	Pro	Gly	Arg	Ala	Arg		
				85					90					95			
Ser	Lys	Arg	Arg	Arg	Ser	Ser	Gly	Ala	Pro	Ile	Arg	Gly	Trp	Ser	Thr		
			100					105					110				
Ser	Glu	Asp	Tyr	Ala	Leu	Gln	Asn	Glu	Gly	Gly	Met	Lys	Thr	Val	Thr		
		115					120					125					
Gly	Ala	Asp	Ala	Ile	Asn	His	Tyr	Gln	Ser	Ser	Ala	Pro	Gln	Gln	Gln		
	130					135					140						
Pro	Arg	Arg	Cys	Thr	His	Cys	Leu	Ser	Gln	Arg	Thr	Pro	Gln	Trp	Arg		
145					150					155					160		
Leu	Gly	Pro	Leu	Gly	Pro	Lys	Thr	Leu	Cys	Asn	Ala	Cys	Gly	Val	Arg		
			165						170					175			
Phe	Lys	Ser	Gly	Arg	Leu	Phe	Pro	Glu	Tyr	Arg	Pro	Ala	Lys	Ser	Pro		
			180					185					190				
Thr	Phe	Ile	Arg	Tyr	Ile	His	Ser	Asn	Ser	His							
		195					200										

<210> 1069  
 <211> 190  
 <212> PRT  
 <213> Pinus radiata

Gly	Asn	Ala	Ala	Arg	Arg	Pro	His	Asp	Val	Leu	Leu	Lys	Leu	Glu	Lys		
1				5				10					15				
Leu	Ser	Ser	Gln	Thr	Thr	Leu	Glu	Ser	Leu	Gln	Arg	Leu	Ile	Val	Gln		
			20					25					30				
Lys	Lys	Cys	Leu	Leu	Phe	Gly	Lys	Val	Gly	Ile	Arg	Ile	Asp	Gly			
		35					40					45					
Lys	Lys	Thr	Ala	Asn	Thr	Glu	Lys	Val	Asn	Glu	Arg	Asn	Thr	Ile	Pro		
	50					55				60							
Arg	Ile	Ile	Phe	Gly	Ala	Leu	Thr	Phe	Thr	Arg	Asn	Arg	Pro	His	Ala		
65				70					75					80			
Leu	Ser	Lys	Asn	Gly	Ser	Ile	Ala	Asp	Thr	Arg	Arg	Asn	Ile	Cys	Gly		
			85					90					95				
Ala	Pro	Gln	Glu	Asp	Gly	Thr	Ile	Cys	Thr	Ala	Ile	Pro	Leu	Lys	Ser		
			100					105					110				
Arg	Lys	Arg	Cys	Pro	Asp	His	Lys	Gly	Gln	Lys	Gly	Gln	Lys	Glu	Lys		
		115					120					125					
Asn	Leu	Ser	Lys	Ile	Asn	Ile	Ser	Ala	Asn	Val	Glu	Ser	Arg	Asn	Gln		
	130					135					140						
Gly	Val	Gly	Glu	His	Glu	Asn	Glu	Tyr	Arg	Tyr	Cys	Gly	Val	Leu	Leu		
145					150					155					160		
Lys	Asp	Gly	Ser	Thr	Cys	Lys	Ile	Ile	Pro	Asp	Lys	Gly	Arg	Lys	Arg		
			165						170					175			
Cys	Asn	Ile	His	Lys	Gly	Met	Arg	Ile	Pro	Gly	Gln	Ala	Lys				
		180						185					190				

<210> 1070  
 <211> 81  
 <212> PRT  
 <213> Pinus radiata

Met	Ala	Thr	Ser	Asn	Pro	Phe	Asp	Leu	Leu	Gly	Asp	Asp	Asp	Asn	Gly		
1				5				10						15			
Asp	Val	Ser	Gln	Leu	Val	Phe	Val	Pro	Gln	Glu	Lys	Pro	Thr	Val	Lys		
			20					25					30				

Lys Ala Ser Gln Pro Ala Gln Thr Ala Thr Ala Lys Leu Pro Ser Lys  
           35  40  45  
 Pro Leu Pro Pro Ala Gln Ala Val Arg Glu Ser Arg Asn Gly Val Gly  
           50  55  60  
 Arg Gly Gly Arg Gly Gly Arg Gly Gly Asp Arg Asn Gln Asp Val Gly  
           65  70  75  80  
 Tyr

<210> 1071  
 <211> 154  
 <212> PRT  
 <213> Pinus radiata

<400> 1071  
 Met Asn Arg Glu Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly  
   1  5  10  15  
 Gly Lys Gly Thr Met Arg Arg Lys Lys Lys Thr Ile His Arg Thr Thr  
           20  25  30  
 Thr Thr Asp Asp Lys Lys Leu Gln Ser Thr Leu Lys Arg Ile Gly Val  
           35  40  45  
 Asn Ala Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Leu Glu Asp Ser  
           50  55  60  
 Val Ile His Phe Gln Asn Pro Lys Val Gln Ala Ser Ile Ala Ala Asn  
           65  70  75  80  
 Thr Trp Val Val Ser Gly Ser Pro Gln Thr Lys Arg Leu Gln Asp Leu  
   85  90  95  
 Leu Pro Gly Ile Ile Asn Gln Leu Gly Pro Asp Ser Phe Ala Asn Leu  
           100  105  110  
 Arg Lys Leu Ala Gln Gln Phe Gln Lys Glu Val Pro His Pro Ala Val  
           115  120  125  
 Glu Glu Asp Asp Asp Asp Val Pro Glu Leu Val Glu Gly Glu Thr Phe  
           130  135  140  
 Glu Glu Ala Ala Lys Gln Glu Ser Ala Ala  
           145  150

<210> 1072  
 <211> 63  
 <212> PRT  
 <213> Pinus radiata

<400> 1072  
 Met Pro His Gln His Gln Glu Arg Phe Pro Ser Gln Glu Gly  
   1  5  10  15  
 Ile Ser Trp Lys Arg Asp Asp Glu Leu Pro Gln Pro Gln Asn Pro Pro  
           20  25  30  
 Lys Lys Lys Arg Tyr Arg Gly Val Arg Gln Arg Pro Trp Gly Lys Trp  
           35  40  45  
 Ala Ala Glu Ile Arg Asp Pro Lys Lys Ala Ala Arg Val Trp Leu  
           50  55  60

<210> 1073  
 <211> 331  
 <212> PRT  
 <213> Pinus radiata

<400> 1073  
 Met Gly Gln Ile Gly Gly Pro His Gly Tyr Pro Asn Ser Ser Pro Ser  
   1  5  10  15  
 Ala Gln Asp Ala Leu Tyr Glu Glu Leu Trp His Ala Cys Ala Gly Pro  
           20  25  30

```

Leu Val Thr Leu Pro Arg Ile Gly Glu Arg Val Phe Tyr Phe Pro Gln
   35           40           45
Gly His Met Glu Gln Val Glu Ala Ser Thr Asn Gln Gly Ala Asp Gln
   50           55           60
His Met Pro Leu Phe Asn Leu Pro Tyr Lys Ile Leu Cys Arg Val Ile
   65           70           75           80
Asn Val Gln Leu Lys Ala Glu Pro Asp Thr Asp Glu Val Phe Ser Gln
           85           90           95
Ile Thr Leu Leu Pro Glu Ala Glu Gln Asp Glu Ser Ser Val Glu Lys
           100           105           110
Glu Pro Leu Thr Pro Leu Pro Pro Lys Pro Leu Val Tyr Ser Phe Cys
           115           120           125
Lys Thr Leu Thr Ala Ser Asp Thr Ser Thr His Gly Gly Phe Ser Val
           130           135           140
Leu Arg Arg His Ala Asp Glu Cys Leu Pro Pro Leu Asp Met Ser Gln
           145           150           155           160
Gln Pro Pro Ser Gln Asp Leu Val Ala Lys Asp Leu His Gly Val Glu
           165           170           175
Trp Arg Phe Arg His Ile Phe Arg Gly Gln Pro Arg Arg His Leu Leu
           180           185           190
Thr Thr Gly Trp Ser Val Phe Val Ser Ser Lys Arg Leu Val Ala Gly
           195           200           205
Asp Ala Phe Ile Phe Leu Arg Gly Glu Asn Gly Glu Leu Arg Val Gly
           210           215           220
Val Arg Arg Ala Met Arg Gln Gln Asn Asn Val Pro Ser Ser Val Ile
           225           230           235           240
Ser Ser His Ser Met His Leu Gly Val Ile Ala Thr Ala Ser His Ala
           245           250           255
Val Thr Thr Lys Thr Met Phe Ser Val Tyr Tyr Lys Pro Arg Thr Ser
           260           265           270
Pro Ser Glu Phe Ile Ile Pro Tyr Asp Gln Tyr Met Glu Ser Met Lys
           275           280           285
Ile Asn Phe Ser Val Gly Met Arg Phe Lys Met Lys Phe Glu Gly Glu
           290           295           300
Glu Val Pro Glu Gln Arg Phe Thr Gly Thr Ile Val Gly Ile Ser Asp
           305           310           315           320
Ala Asp Pro Val Asn Trp Pro Asn Ser Lys Trp
           325           330

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<210> 1074
<211> 113
<212> PRT
<213> Pinus radiata

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```

<400> 1074
Met Thr Gln Ala Thr Asn Tyr Thr Ala Gly Thr Ile Arg Asp Asp Gln
   1           5           10           15
Glu Glu Gln Cys Val Arg Arg Gly Pro Trp Thr Val Asp Glu Asp Met
           20           25           30
Ser Leu Ile Arg Cys Val Thr Thr Arg Gly Glu Gly Arg Trp Asn Thr
           35           40           45
Val Ala Lys Phe Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu
           50           55           60
Arg Trp Leu Asn Tyr Leu Arg Pro Asp Val Lys Arg Gly Asn Ile Thr
           65           70           75           80
Pro Glu Glu Gln Leu Leu Ile Leu Glu Leu His Arg Leu Trp Gly Asn
           85           90           95
Arg Trp Ser Lys Ile Ala Arg Gln Leu Pro Gly Arg Thr Asp Asn Glu
           100           105           110
Ile

```

<210> 1075  
 <211> 44  
 <212> PRT  
 <213> Pinus radiata

<400> 1075  
 Met Ala Glu Asn Tyr Gly Ser Pro Asp Ser Ser Pro Arg Ser Glu Asn  
 1 5 10 15  
 Glu Ser Gly Gly Gly His Met Gly Gly Ser Asp Phe Ser Val Lys Glu  
 20 25 30  
 Gln Asp Arg Phe Leu Pro Ile Ala Asn Val Gly Arg  
 35 40

<210> 1076  
 <211> 282  
 <212> PRT  
 <213> Pinus radiata

<400> 1076  
 Met Pro Met Leu Ala Glu Thr Tyr Arg Asp Ser Phe Glu Thr Thr Ser  
 1 5 10 15  
 Gly Gly Ser Ser Val Asp Leu Val Gly Met Ala Leu Pro Gly Leu Ala  
 20 25 30  
 Pro Asn Leu Ser Ser Ala Ser Val Ser Ala Ser Ala Ser Glu Asp Ser  
 35 40 45  
 Ala Lys Lys Ile Arg Lys Pro Tyr Thr Ile Thr Lys Ser Arg Glu Ser  
 50 55 60  
 Trp Ser Glu Gln Glu His Asp Lys Phe Leu Glu Ala Leu Gln Leu Phe  
 65 70 75 80  
 Asp Arg Asp Trp Lys Lys Ile Glu Ala Phe Val Gly Ser Lys Thr Val  
 85 90 95  
 Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe Leu Lys Val Gln Lys  
 100 105 110  
 Asn Gly Thr Arg Glu His Val Pro Pro Arg Pro Lys Arg Lys Ala  
 115 120 125  
 Ser His Pro Tyr Pro Gln Lys Ala Ser Lys Asn Val Pro Val Ser Gln  
 130 135 140  
 Gln Val Ser Thr Ala Phe Pro Thr Ala Ala Thr Gln Leu Asp Ser Gly  
 145 150 155 160  
 Tyr Tyr Pro Arg Ala Glu Ser Ser Ser Ile Leu Thr Lys Ser Gly Ser  
 165 170 175  
 Ser Cys Pro Thr Val Ser Ser Trp Val His His Thr Ile Pro Ser Ile  
 180 185 190  
 Asp Ala Ser Phe Val Glu Lys Asp Asp Gly Gly Pro Pro Gly Ile Glu  
 195 200 205  
 Thr Gly Asn Asn Cys Ser Ser Gly Ser Thr Glu Ser Ser Pro Pro Thr  
 210 215 220  
 Trp Pro Pro Cys Ser Glu Ile Pro Glu Lys Val Lys Pro Asp Phe Ser  
 225 230 235 240  
 Gln Val Tyr Lys Phe Ile Gly Ser Val Phe Asp Pro Ser Thr Thr Asp  
 245 250 255  
 His Leu Lys Lys Leu Lys Glu Trp Ile Gln Leu Ile Leu Lys Leu Cys  
 260 265 270  
 Cys Thr His Glu Glu Pro Phe His Asn Leu  
 275 280

<210> 1077  
 <211> 104  
 <212> PRT  
 <213> Pinus radiata



&lt;400&gt; 1077

```

Met Gly Arg Ser Phe Ser Cys Trp Ser Cys Ser Lys Asp Asn Gly His
 1           5           10           15
Glu Arg Leu Asn Arg Gly Ser Trp Ser Ala Glu Glu Asp Thr Ile Leu
          20           25           30
Ser Glu His Ile Lys Thr His Gly Val Gly Arg Trp Thr Ser Leu Pro
          35           40           45
Lys Lys Ala Gly Leu Lys Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp
          50           55           60
Phe Asn Tyr Leu Arg Ser Asp Ile Lys His Gly Asn Ile Ser Pro Glu
65           70           75           80
Glu Glu Glu Leu Leu Ile Arg Leu His Arg Leu Leu Gly Asn Arg Trp
          85           90           95
Ser Leu Ile Ala Gly Arg Leu Pro
          100

```

&lt;210&gt; 1078

&lt;211&gt; 93

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1078

```

Met Asp Arg Asp Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly
 1           5           10           15
Gly Lys Gly Thr Val Arg Arg Lys Lys Lys Ala Val His Arg Ala Thr
          20           25           30
Thr Thr Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Leu Gly Val
          35           40           45
Asn Thr Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Glu Met
          50           55           60
Val Ile His Phe Ile Asn Pro Lys Val Gln Ala Ser Ile Asn Ala Asn
65           70           75           80
Thr Trp Val Val Ser Gly Ser Pro Gln Thr Lys Asn Leu
          85           90

```

&lt;210&gt; 1079

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1079

```

Met Asp Arg Asp Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly
 1           5           10           15
Gly Lys Gly Thr Val Arg Arg Lys Lys Lys Ala Val His Arg Ala Thr
          20           25           30
Thr Thr Asp Asp Lys Arg Leu Gln Ser Thr Leu Lys Arg Leu Gly Val
          35           40           45
Asn Thr Ile Pro Ala Ile Glu Glu Val Asn Ile Phe Lys Asp Glu Met
          50           55           60
Val Ile His Phe Ile Asn Pro Lys Val Gln Ala Ser Ile Asn Ala Asn
65           70           75           80
Thr Trp Val Val Ser Gly Ser Pro Gln Thr Lys Asn Leu Gln Asp Leu
          85           90           95
Leu Pro Gly Ile Ile Asn Gln Leu Gly Pro Asp Asn Leu Ile Asn Leu
          100          105          110
Lys Lys Ile Ala Gln Gln
          115

```

&lt;210&gt; 1080

&lt;211&gt; 191

<212> PRT  
<213> Pinus radiata

<400> 1080  
 Asp Asp Glu Glu Ala Ser Leu Lys Gly Lys Val Arg Trp Gly Leu  
 1 5 10 15  
 Asp Ser Ile Ala Ala Leu Gly Leu Lys Phe Ile Lys Arg Ala Leu Ala  
 20 25 30  
 Lys Lys Lys Thr Val Gly Ile Ala Gly Gly Ala Asp Arg Val Leu Leu  
 35 40 45  
 Ser Gly Arg Met Lys Leu Lys Pro Lys Gly Leu Met Cys Val Phe Cys  
 50 55 60  
 Gly Leu Leu Arg Val Arg Gly Asn Gly Ile Ile Gly Val Lys Val Phe  
 65 70 75 80  
 Leu Glu Lys Tyr Ala Gly Ser Ser Gln Gln Glu Ile Leu Arg Val Glu  
 85 90 95  
 Ile Ser Leu Ser Phe Ala Phe Gln Asn Glu Asp Arg Leu Leu Pro Ala  
 100 105 110  
 Ala Ser Gly Arg Gly Lys Glu Glu Ser Gln Phe Arg Ala Met Ala Cys  
 115 120 125  
 Met Cys Trp Ala Thr Cys Val Pro Thr Cys Cys Trp Glu Pro Cys Cys  
 130 135 140  
 Ile Phe Ser Ser Arg Ser Gln Ala Gly Gly Cys Leu Asn Lys Gln Glu  
 145 150 155 160  
 Val Asp Ala His Ile Pro Asn Tyr Pro Asn Leu Pro Pro Gln Leu Ile  
 165 170 175  
 Cys His Tyr Thr Met Leu Leu Cys Arg Gln Met Trp Arg Gln Met  
 180 185 190

<210> 1081  
<211> 86  
<212> PRT  
<213> Pinus radiata

<400> 1081  
 Ile Asp Ser Ser Glu Lys Arg Leu Lys Gly Lys Asn Tyr Ile Asp Ile  
 1 5 10 15  
 Thr Thr Glu Arg Ala Ala Gln Glu Pro Gly Cys Ile Met Ala Arg Pro  
 20 25 30  
 Gln Arg Tyr Arg Gly Val Arg Gln Arg His Trp Gly Ser Trp Val Ser  
 35 40 45  
 Glu Ile Arg His Pro Leu Leu Lys Thr Arg Ile Trp Leu Gly Thr Phe  
 50 55 60  
 Glu Thr Ala Glu Asp Ala Ala Arg Ala Tyr Asp Glu Ala Ala Arg Met  
 65 70 75 80  
 Met Cys Gly Pro Arg Ala  
 85

<210> 1082  
<211> 119  
<212> PRT  
<213> Pinus radiata

<400> 1082  
 Met Val Arg Ser Pro Cys Cys Asp Lys Val His Thr Asn Asn Lys Gly  
 1 5 10 15  
 Ala Trp Thr Lys Glu Glu Asp Glu Arg Leu Ile Ala His Ile Glu Ala  
 20 25 30  
 His Gly Glu Gly Ser Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu  
 35 40 45  
 Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro

```

      50              55              60
Asp Leu Lys Arg Gly Ser Phe Ser Glu Glu Glu Asp Asp Leu Ile Ile
65              70              75              80
Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg
      85              90
Leu Gln Gly Glu Arg Thr Thr Lys Ile Lys Asn Tyr Trp Asn Thr His
      100              105              110
Met Lys Arg Lys Leu Leu Ser
      115

```

<210> 1083  
 <211> 128  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 1083
Met Gly Arg Ser Pro Cys Pro Pro Lys Glu Ala Leu Asn Arg Gly Ala
1              5              10              15
Trp Thr Gly Met Glu Asp Thr Ile Leu Thr Glu Tyr Ile Arg Val His
      20              25              30
Gly Ser Gly Gly Trp Lys Asp Ile Ser Lys Arg Ala Gly Leu Lys Arg
      35              40              45
Cys Ala Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Asp
      50              55              60
Ile Lys Arg Gly Asn Ile Ser Pro Glu Glu Glu Leu Ile Ile Arg
65              70              75              80
Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu
      85              90              95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Met
      100              105              110
Ser Lys Lys Pro Trp Leu Ser Met Asp Glu Ser Gln Ser Asn Thr Ser
      115              120              125

```

<210> 1084  
 <211> 126  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 1084
Glu Glu Glu Asp Glu Glu Glu Ala Gly Lys Glu Leu Glu Ala Trp Glu
1              5              10              15
Arg Ala Tyr Ala Asp Glu Arg Ser Trp Glu Thr Leu Gln Glu Asp Glu
      20              25              30
Glu Gly Leu Leu Asn Phe Asp Lys Lys Gln Gln Gln Gln Gln Arg
      35              40              45
Gln Tyr Arg Arg Arg Leu Gln Ser Ala Ala Ala Ala Ser Asn Ile
      50              55              60
Gln Arg Gly Leu Ile Arg Tyr Leu Tyr Ile Ile Asp Phe Ser Arg
65              70              75              80
Ala Ala Ala Glu Lys Asp Phe Lys Pro Asn Arg Met Val Val Val Ala
      85              90              95
Asn Cys Val Glu Ala Phe Val Arg Glu Phe Phe Asp Gln Asn Pro Leu
      100              105              110
Ser Gln Leu Gly Ile Val Ile Ile Lys Asn Gly Val Ala His
      115              120              125

```

<210> 1085  
 <211> 139  
 <212> PRT  
 <213> Pinus radiata

<400> 1085  
 Arg Ala Pro Cys Cys Glu Lys Thr His Thr Asn Lys Gly Ala Trp Ser  
 1 5 10 15  
 Lys Asp Glu Asp Glu Ala Leu Val Ala Tyr Ile Gln Ala His Gly Glu  
 20 25 30  
 Gly Ser Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Gln Arg Cys Gly  
 35 40 45  
 Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu Lys  
 50 55 60  
 Arg Gly Asn Phe Ser Pro Glu Glu Asp Glu Ile Ile Ile Lys Leu His  
 65 70 75 80  
 Ser Met Leu Gly Asn Lys Trp Ser Leu Ile Ala Ser Lys Leu Pro Gly  
 85 90 95  
 Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile Lys Arg  
 100 105 110  
 Lys Met Leu Glu Arg Gly Leu Asp Pro Ser Thr His Leu Pro Leu Met  
 115 120 125  
 Ser Asp His Gly Ser Phe Glu Ser Ser Ser Lys  
 130 135

<210> 1086  
 <211> 189  
 <212> PRT  
 <213> Pinus radiata

<400> 1086  
 Lys Val Val Pro Pro Leu Asp Phe Thr Gln Gln Pro Pro Ala Gln Glu  
 1 5 10 15  
 Leu Thr Ala Arg Asp Leu His Asp Asn Glu Trp Lys Phe Arg His Ile  
 20 25 30  
 Phe Arg Gly Gln Pro Lys Arg His Leu Leu Thr Thr Gly Trp Ser Val  
 35 40 45  
 Phe Val Ser Ala Lys Arg Leu Ala Ala Gly Asp Ser Val Leu Phe Ile  
 50 55 60  
 Trp Asn Glu Lys Gly Gln Leu Leu Leu Gly Ile Arg Arg Ala Asn Arg  
 65 70 75 80  
 Pro Gln Ala Val Met Pro Ser Leu Val Leu Ser Ser Asp Ser Met His  
 85 90 95  
 Ile Gly Leu Leu Ala Ala Ala Ala His Ala Ala Ala Thr Asn Ser Arg  
 100 105 110  
 Phe Thr Ile Phe Tyr Asn Pro Arg Ala Ser Pro Ser Glu Phe Val Ile  
 115 120 125  
 Pro Leu Ala Lys Tyr Val Lys Ala Val Tyr His Thr Arg Val Ser Ile  
 130 135 140  
 Gly Met Arg Phe Arg Met Leu Phe Glu Thr Glu Glu Ser Ser Val Arg  
 145 150 155 160  
 Arg Tyr Met Gly Thr Ile Thr Gly Ile Ser Asp Leu Asp Gln Val Arg  
 165 170 175  
 Trp Pro Asn Ser His Trp Arg Ser Val Lys Val Gly Trp  
 180 185

<210> 1087  
 <211> 132  
 <212> PRT  
 <213> Pinus radiata

<400> 1087  
 Trp Glu Phe Ala Asn Asp Cys Phe Arg Lys Gly Glu Lys Gln Leu Leu  
 1 5 10 15  
 Cys Glu Ile His Arg Arg Lys Ser Val Gln Gln Ser Ser Ala Ala Pro  
 20 25 30

Ala Ser Arg Cys Val Ser Pro Val Asn Ser Val Glu Glu Gln Ala Leu  
           35                          40                          45  
 Ser Ser Thr Ser Ser Pro Val Ser Ser His Ala Glu Ala Ala Leu Val  
       50                          55                          60  
 Asn Cys Gly Gln Asn Ser Thr Ser Gly Leu His Gly Glu Asn Glu Lys  
 65                          70                          75                          80  
 Leu Arg Lys Asp Asn Leu Leu Leu Met Ser Glu Leu Ala Gln Met Lys  
           85                          90                          95  
 Lys Gln Cys Asn Asp Leu Leu Leu Phe Leu Ser Lys Cys Val Asn Ile  
                           100                          105                          110  
 Thr Pro Asp Asn Leu Ser Asn Ile Leu Ile Ala Ala Ser Glu Thr Asn  
           115                          120                          125  
 Cys Arg Asp Glu  
       130

&lt;210&gt; 1088

&lt;211&gt; 214

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1088

Gly Lys Trp Gly Val Pro Asp Asn Leu Tyr Gly Ala Gln Glu Asp Ser  
   1                          5                          10                          15  
 Gly Gly Ser Ser Val Lys Gln Lys Asn Leu Lys Asp Gly Asp Gln Phe  
           20                          25                          30  
 Thr Ser Ser Asp Glu Ala Asp Ser Glu Val Asn Glu Phe Asn Ile Met  
       35                          40                          45  
 Lys Arg Ser Asn Ser Gly Val Gly Tyr Glu Asp Asn Lys Arg Ser Gly  
       50                          55                          60  
 Gly Gln Gly Asp Gly Asn Gln Tyr Arg Ser Arg His Ser Arg Ser Ile  
 65                          70                          75                          80  
 Ser Met Asp Ser Ile Met Ser Lys Met His Asn Phe Ser Glu Asp Leu  
           85                          90                          95  
 Glu Gln Glu Pro Ser Gln Gly Arg Asn Val Arg His Ser His Ser Asn  
           100                          105                          110  
 Ser Met Asp Gly Ser Thr Asn Phe Asn Val Glu Phe Gly Asn Gly Glu  
           115                          120                          125  
 Phe Ser Ala Ser Glu Met Lys Lys Ile Met Ala Ser Glu Lys Leu Ala  
       130                          135                          140  
 Glu Leu Ala Thr Val Asp Pro Lys Arg Val Lys Arg Ile Leu Ala Asn  
 145                          150                          155                          160  
 Arg Gln Ser Ala Ala Arg Ser Lys Glu Arg Lys Met Arg Tyr Ile Ser  
           165                          170                          175  
 Glu Leu Glu Arg Lys Val Gln Thr Leu Gln Thr Glu Ala Thr Thr Leu  
           180                          185                          190  
 Ser Ala Gln Leu Thr Leu Leu Gln Arg Asp Gln Leu Asp Trp Ala Val  
           195                          200                          205  
 Arg Thr Thr Ser Ser Ser  
       210

&lt;210&gt; 1089

&lt;211&gt; 97

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1089

Met Ala Asp Gly His Gln Phe Asn Asn Ile Leu Leu Val Gly Arg Gly  
   1                          5                          10                          15  
 Gly Thr Asn Pro Gly Gln Leu Arg Ile His Ser Gly Gly Ile Val Trp  
           20                          25                          30  
 Arg Arg Gln Gly Gly Gly Lys Val Val Asp Val Ala Lys Asn Glu Val

```

          35          40          45
Lys Ser Leu Ser Trp Thr Arg Val Pro Arg Gly Tyr Gln Leu Gly Val
   50          55          60
Lys Leu Lys Ala Gly Leu Asn Ile Lys Leu Ala Gly Phe Arg Glu Gln
   65          70          75          80
Asp Val Gly Asn Leu Thr Asn Phe Met Thr Asn Thr Ile Gly Leu Ala
          85          90          95
Pro

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<210> 1090
<211> 108
<212> PRT
<213> Pinus radiata

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<400> 1090
Met Gly Asp His Ser Gly Gly Glu Ser Ser Pro His Ser Asp Ile Glu
 1          5          10          15
Ser Thr Gly Ile His Asn Asn Gly Ser Ser Ser Ser Gln Ser Ile
          20          25          30
Ile Arg Glu Gln Asp Arg Leu Leu Pro Ile Ala Asn Val Gly Arg Ile
          35          40          45
Met Lys Lys Thr Leu Pro Thr Asn Ala Lys Ile Ser Lys Glu Ala Lys
   50          55          60
Glu Ile Met Gln Glu Cys Val Ser Glu Phe Ile Ser Phe Val Thr Gly
   65          70          75          80
Glu Ala Ser Asp Lys Cys His Lys Glu Lys Arg Lys Thr Ile Asn Gly
          85          90          95
Asp Asp Ile Leu Trp Ala Met Thr Thr Leu Gly Phe
          100          105

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<210> 1091
<211> 90
<212> PRT
<213> Pinus radiata

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<400> 1091
Arg Asn Ile Gln Arg Asn Glu Tyr His Asn Leu Phe Asn Phe Ile Ser
 1          5          10          15
Ser Lys Gly Leu Lys Ile Met Asn Leu Gly Asp Ala His Gly Thr Ser
          20          25          30
Gly Val Ala Ala Val Leu Glu Asn Ser Asp Asp Glu Ala Val Asp Pro
          35          40          45
His Leu Glu Arg Ile Lys Ser Ala Arg Glu Gly Gly Ala Gly Glu Asp
   50          55          60
Ser Asp Glu Glu Ala Cys Tyr Thr Gly Asp Leu Ser Leu Ile Cys Ala
   65          70          75          80
Val Val Lys Glu Leu Ile Cys Thr His Asp
          85          90

```

```

<210> 1092
<211> 133
<212> PRT
<213> Pinus radiata

```

```

<400> 1092
Met Gly Cys Val Ser Ser Lys Val Glu Asn Glu Glu Leu Val Lys Arg
 1          5          10          15
Cys Arg Asp Arg Arg Arg Leu Met Lys Gln Ala Val Asn Ser Arg His
          20          25          30
Asn Phe Ala Ala Ala His Ile Ala Tyr Leu Arg Ala Leu Gln Asn Thr

```

```

      35              40              45
Gly Asn Ala Leu Val Gln Phe Ala Glu Gly Glu Ser Ser Ala Met Asn
  50              55              60
Gly Asn Ala Ile Glu Glu Ala Ala Thr Pro Met Pro Ala Thr Pro Leu
65              70              75              80
Thr Ala Ser His Arg His Pro Met Lys Phe His Pro Pro Pro Pro Pro
      85              90              95
Pro Pro Pro Pro Leu Val Pro Ser Ser Pro Ser Val Ser Pro Ser Met
      100              105              110
Glu Ser Phe Arg Met Pro Ser Lys His Asn Pro Leu Ser Arg Ser Thr
      115              120              125
Ser Asp Ile Ser Tyr
130

```

<210> 1093  
 <211> 148  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 1093
Met Gly Arg Ala Pro Cys Cys Thr Lys Val Gly Leu Asn Lys Gly Ala
  1              5              10              15
Trp Ser Ala Glu Glu Asp Ser Leu Leu Gly Arg Tyr Ile Gln Thr His
      20              25              30
Gly Glu Gly Asn Trp Arg Ser Leu Pro Lys Lys Ala Gly Leu Arg Arg
      35              40              45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Cys
      50              55              60
Ile Lys Arg Gly Asn Ile Thr Thr Asp Glu Glu Glu Leu Ile Ile Arg
65              70              75              80
Met His Ala Leu Leu Gly Asn Arg Trp Ser Ile Ile Ala Gly Arg Val
      85              90              95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr Asn Leu
      100              105              110
Ser Lys Lys Leu Ala Val Arg Gly Ile Asp Pro Lys Thr His Lys Lys
      115              120              125
Ile Thr Thr Asp Gly Thr Asn Arg Val Asn Gly Asp Arg Phe Ser Gln
      130              135              140
Arg Lys Gly Glu
145

```

<210> 1094  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 1094
Arg Gln Leu Ile Arg Glu Leu Glu Gln Met Phe Asn Ile Glu Gly Glu
  1              5              10              15
Leu Glu Asp Pro Ser Lys Gly Trp Gln Val Val Tyr Thr Asp Asn Glu
      20              25              30
Gly Asp Met Met Leu Val Gly Asp Asp Pro Trp Gln Glu Phe Cys Ser
      35              40              45
Ile Val Arg Lys Ile Tyr Ile Tyr Thr Arg Glu Glu Val Glu Lys Met
      50              55              60
Thr Pro Gln Thr Pro Ser Ala Asn Ser Arg Asp Val Gln Lys Ser Leu
65              70              75              80
Ser Gln Glu Glu Thr Ser Arg Ser Ser Asp Arg Gln Asp Ser Ser Ile
      85              90              95
Ala Gly Val Thr Ala Glu Arg Ser Ser Asp Ala
      100              105

```

<210> 1095  
 <211> 275  
 <212> PRT  
 <213> Pinus radiata

<400> 1095  
 Met Ser Asn Gly Arg Leu Cys Glu Asp Leu Asp Arg Ile Lys Gly Pro  
 1 5 10 15  
 Trp Ser Pro Glu Glu Asp Ala Ser Leu Gln Arg Leu Val Gln Lys Tyr  
 20 25 30  
 Gly Pro Arg Asn Trp Thr Leu Ile Ser Lys Gly Ile Pro Gly Arg Ser  
 35 40 45  
 Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser Pro Gln Val  
 50 55 60  
 Glu His Arg Pro Phe Thr Pro Ser Glu Asp Ala Ala Ile Leu Gln Ala  
 65 70 75 80  
 His Ala Gln His Gly Asn Lys Trp Ala Thr Ile Ala Arg Ala Leu Pro  
 85 90 95  
 Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn Ser Thr Leu Arg  
 100 105 110  
 Arg Arg Cys Arg Asp Pro Lys Lys Gly Ile Val Val His Leu Asp Asp  
 115 120 125  
 Glu Ile Ser Ser Leu Asp Ala Ala Arg Lys Arg Ser Ser Asp Gly Phe  
 130 135 140  
 Ser His Asp Gly Ser Ser Ala Leu Glu Asp Asn Gly Cys Ser Ser Trp  
 145 150 155 160  
 Glu Val Asp Ser Lys Arg Leu Lys Arg Leu Gly Glu Leu Gly Thr Glu  
 165 170 175  
 Gln Gly Pro Glu Val Glu Ala Glu Val Glu Val Ser Asp Arg Ser Asp  
 180 185 190  
 Ala Asn Pro Gly Arg Val Leu Tyr Arg Pro Val Pro Val Val Ser Phe  
 195 200 205  
 Phe Ser Ser Phe Gly Lys Thr Val Ala Asn Leu Gln Glu Thr Ala Ala  
 210 215 220  
 Gly Ala Val Gly Val Asp Pro Pro Thr Ser Leu Ser Leu Ser Leu Pro  
 225 230 235 240  
 Gly Leu Asp Pro Ala Ile Pro Ser Pro Lys Leu Ser Thr Gln Lys Asp  
 245 250 255  
 Ser His Asn Asn Ser Thr Val Asn Asn Asn Ile Pro Ile Pro Pro Val  
 260 265 270  
 Val Asn Thr  
 275

<210> 1096  
 <211> 128  
 <212> PRT  
 <213> Pinus radiata

<400> 1096  
 Glu Phe Gly Arg Ser Ser Glu Lys Gly Arg Gly Tyr Gly Arg Gly Arg  
 1 5 10 15  
 Gly Arg Gly Gly Arg Gly Gly Tyr Gly Asn Asp Ala Gly Asp Glu Ser  
 20 25 30  
 Gln Arg Pro Arg Arg Gln Tyr Glu Arg Arg Ser Gly Thr Gly Arg Gly  
 35 40 45  
 Tyr Glu Val Lys Arg Glu Gly Ala Gly Gln Gly Asn Trp Gly Thr Pro  
 50 55 60  
 Thr Asp Gln Gly Phe Thr Glu Glu Pro Glu Glu Leu Ser Arg Ala Glu  
 65 70 75 80  
 Glu Glu Lys Thr Val Thr Pro Glu Lys Gln Glu Glu Gln Lys Pro Ser



				85					90					95			
Glu	Glu	Ser	Asn	Gln	Glu	Ile	Pro	Ala	Pro	Glu	Ser	Glu	Glu	Lys	Lys		
			100					105					110				
Glu	Glu	Glu	Glu	Asp	Lys	Asp	Met	Thr	Leu	Asp	Glu	Tyr	Glu	Lys	Val		
			115				120					125					

<210> 1097  
 <211> 135  
 <212> PRT  
 <213> Pinus radiata

<400> 1097

Ala	Val	Asn	Ser	Ser	Leu	Ser	Val	Gly	Met	Arg	Phe	Lys	Met	Arg	Phe		
1				5					10					15			
Glu	Gly	Glu	Glu	Ser	Pro	Glu	Arg	Arg	Phe	Thr	Gly	Thr	Ile	Ile	Gly		
			20					25					30				
Met	Gly	Glu	Val	Asp	Asn	Val	Arg	Trp	Pro	Glu	Ser	Lys	Trp	Arg	Ser		
		35					40					45					
Leu	Lys	Val	Gln	Trp	Asp	Glu	Thr	Ser	Val	Val	Pro	Arg	Pro	Glu	Arg		
	50				55					60							
Val	Ser	Pro	Trp	Glu	Ile	Glu	Thr	Phe	Val	Ala	Ser	Ser	Ala	Ala	Leu		
65					70				75						80		
Asn	Pro	Leu	Pro	Ala	Pro	Arg	Thr	Lys	Lys	Pro	Arg	Pro	Asn	Leu	Val		
				85				90					95				
Ser	Ser	Ser	Gln	Glu	Leu	Met	Ile	His	Gly	Ser	Gly	Lys	Thr	Ala	Thr		
			100					105					110				
Asp	Ser	Ser	Gln	Val	His	Arg	Leu	Pro	Arg	Val	Leu	Gln	Gly	Gln	Glu		
		115					120					125					
Met	Arg	Thr	Phe	Gly	Gly	Ser											
		130				135											

<210> 1098  
 <211> 46  
 <212> PRT  
 <213> Pinus radiata

<400> 1098

Ala	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Leu	Asn	Tyr	Leu	Arg	Pro	Asp	Ile		
1				5					10					15			
Lys	Arg	Gly	Asn	Ile	Ser	Pro	Glu	Glu	Glu	Glu	Leu	Ile	Ile	Arg	Leu		
			20					25					30				
His	Arg	Leu	Leu	Gly	Asn	Arg	Tyr	Val	Glu	Asn	Arg	Gly	Thr				
		35					40					45					

<210> 1099  
 <211> 113  
 <212> PRT  
 <213> Pinus radiata

<400> 1099

Met	Gly	Arg	Ser	Pro	Cys	Cys	Ser	Lys	Glu	Gly	Leu	Asn	Arg	Gly	Ala		
1				5					10					15			
Trp	Thr	Lys	Arg	Glu	Asp	Met	Ile	Leu	Ser	Glu	Tyr	Val	Arg	Ile	His		
			20					25					30				
Gly	Asp	Gly	Gly	Trp	Arg	Asn	Leu	Pro	Glu	Lys	Ala	Gly	Leu	Lys	Arg		
		35					40					45					
Cys	Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Leu	Asn	Tyr	Leu	Arg	Pro	Asp		
	50				55					60							
Ile	Lys	Arg	Gly	Asn	Ile	Cys	Pro	Ala	Glu	Glu	Glu	Leu	Ile	Ile	Arg		
65					70				75						80		
Leu	His	Arg	Leu	Leu	Gly	Asn	Arg	Trp	Ser	Leu	Ile	Ala	Gly	Arg	Leu		

85 90 95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Leu  
 100 105 110  
 Ser

<210> 1100  
 <211> 148  
 <212> PRT  
 <213> Pinus radiata

<400> 1100  
 Pro Tyr Leu His Glu Ser Arg His Leu His Ala Met Lys Arg Ala Arg  
 1 5 10 15  
 Gly Cys Gly Gly Arg Phe Leu Asn Thr Lys Lys Leu Glu Asp Ser Lys  
 20 25 30  
 Ala Asn Val Asp Asn Gly Lys Thr Pro Glu Gly His Thr Ala Gln Ala  
 35 40 45  
 Gly Ser Ser Ser Gly Ser Glu Val Leu Gln Ser Glu Asn Gly Asn Gly  
 50 55 60  
 Asn Ser Thr Gln Glu Leu His Gly Ala Cys Gly Met Ser Gly Ser Gln  
 65 70 75 80  
 Val Thr Ser Ile Ala Gln Ser Ser Glu Asn Gly Thr Thr Tyr Gln Tyr  
 85 90 95  
 Ser His Thr Asn Gly Ala Tyr Leu Asn His Tyr Gln His Pro His Phe  
 100 105 110  
 His Ile Ser Ala Phe His Pro Leu Ser Ser Gly Gly Glu Glu Gly Ser  
 115 120 125  
 Ser Ala Lys Gly Gly Ser Ile Ile Ser Gly Gly Ser Gln Gln Arg Val  
 130 135 140  
 Val Val Ile Gln  
 145

<210> 1101  
 <211> 48  
 <212> PRT  
 <213> Pinus radiata

<400> 1101  
 Met Gly Arg Ser Pro Cys Pro Pro Lys Glu Ala Leu Asn Arg Gly Ala  
 1 5 10 15  
 Trp Thr Gly Met Glu Asp Thr Ile Leu Thr Glu Tyr Ile Arg Val His  
 20 25 30  
 Gly Ser Gly Gly Trp Lys Ala Ile Ser Lys Arg Ala Gly Glu Cys Gln  
 35 40 45

<210> 1102  
 <211> 191  
 <212> PRT  
 <213> Pinus radiata

<400> 1102  
 Val Thr Arg Pro Gly Lys Phe Arg Ser Cys Gln Asp Gly Tyr Ala Val  
 1 5 10 15  
 Arg Ala Ser Leu Lys Ala Glu Asp Gly Val Leu Tyr Pro Leu Glu Lys  
 20 25 30  
 Ser Phe Phe Phe Leu Pro Lys Pro Thr Leu Ile Leu His Glu Glu  
 35 40 45  
 Ile Glu Tyr Leu Glu Phe Glu Arg His Gly Ala Ala Gly Thr Ser Ser  
 50 55 60  
 Met Ser Ser His Tyr Phe Asp Leu Ile Ile Lys Leu Lys Ser Glu Gln

65					70					75				80	
Glu	His	Gln	Phe	Arg	Asn	Ile	Gln	Arg	Asn	Glu	Tyr	His	Asn	Leu	Phe
				85					90					95	
Ser	Phe	Ile	Asn	Thr	Lys	Gly	Leu	Lys	Ile	Ile	Asn	Leu	Gly	Ala	Thr
			100					105						110	
Glu	Thr	Ile	Gly	Gly	Val	Ala	Ala	Ala	Leu	Gln	Asn	Ser	Asp	Asp	Glu
		115					120						125		
Ala	Val	Asp	Pro	His	Leu	Glu	Arg	Ile	Lys	Ile	Tyr	Val	Met	Val	Glu
		130				135						140			
Leu	Val	Leu	Lys	Thr	Ala	Thr	Lys	Arg	Met	Lys	Thr	Leu	Leu	Gln	Lys
145					150					155					160
Thr	Met	Met	Leu	Asp	Leu	Gln	Gln	Met	Ser	Gln	Lys	Lys	Arg	Asp	Gln
				165					170					175	
Met	Gln	Val	Arg	Val	Gln	Arg	Ser	Ser	Asn	Leu	Gln	Arg	Lys	Lys	
			180					185						190	

&lt;210&gt; 1103

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1103

Met	Ser	Pro	Pro	Pro	Ser	Tyr	Ser	Met	Phe	Pro	Asn	Ser	Gly	Met	Gly
1				5					10					15	
Leu	Asn	Pro	Ser	Val	Thr	Ser	Ser	Glu	Pro	Ser	Ser	Gln	Val	Ser	Gly
			20					25					30		
Ser	Ile	Pro	His	Gln	Tyr	Ser	Gly	Ser	Glu	Glu	Asp	Pro	Lys	Leu	Thr
		35					40					45			
Ile	Asp	Glu	Arg	Lys	Gln	Lys	Arg	Met	Leu	Ser	Asn	Arg	Glu	Ser	Ala
	50					55					60				
Arg	Arg	Ser	Arg	Met	Arg	Lys	Gln	Gln	His	Leu	Asp	Glu	Leu	Arg	Ala
65					70					75					80
Arg	Thr	Ala	His	Leu	Arg	Ala	Glu	Asn	Ser	His	Met	Leu	Thr	Lys	Phe
			85						90					95	
Asn	Ile	Ala	Ser	Gln	Lys	Tyr	Met	Gln	Leu						
			100					105							

&lt;210&gt; 1104

&lt;211&gt; 162

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1104

Arg	Gly	Gln	Pro	Arg	Arg	His	Leu	Leu	Thr	Thr	Gly	Trp	Ser	Val	Phe
1				5					10					15	
Val	Ser	Ala	Lys	Arg	Leu	Val	Ala	Gly	Asp	Ala	Phe	Ile	Phe	Leu	Arg
			20					25					30		
Gly	Glu	Asn	Ser	Glu	Leu	Arg	Val	Gly	Val	Arg	Arg	Val	Met	Arg	Gln
		35					40					45			
Gln	Ser	Asn	Met	Pro	Ser	Ser	Val	Ile	Ser	Ser	His	Ser	Met	His	Leu
		50				55					60				
Gly	Val	Ile	Ala	Thr	Ala	Ser	His	Ala	Val	Thr	Thr	Arg	Thr	Met	Phe
65					70					75					80
Thr	Val	Tyr	Tyr	Lys	Pro	Arg	Thr	Ser	Gln	Ser	Glu	Phe	Ile	Ile	Pro
			85						90					95	
Tyr	Asp	Lys	Tyr	Met	Glu	Ala	Val	Asn	Ser	Asn	Leu	Ser	Val	Gly	Met
			100					105					110		
Arg	Phe	Lys	Met	Arg	Phe	Glu	Gly	Glu	Glu	Ala	Pro	Glu	Arg	Arg	Phe
		115					120					125			
Thr	Gly	Thr	Ile	Ile	Gly	Ile	Gly	Asp	Val	Asp	Pro	Ser	Arg	Trp	Pro
		130				135					140				

Ser Ser Lys Trp Arg Ser Leu Lys Val Gln Trp Asp Glu Thr Cys Ala  
 145 150 155 160  
 Ile Pro

<210> 1105  
 <211> 115  
 <212> PRT  
 <213> Pinus radiata

<400> 1105  
 Met Ala Gln Ser Glu Glu Gln Pro Asn Glu Ala Thr Val Pro Arg Pro  
 1 5 10 15  
 Ala Asp Ser His Arg Ser Ile Pro Thr Pro Phe Leu Met Lys Thr Tyr  
 20 25 30  
 Arg Leu Val Asp Asp Pro Ser Leu Asn Asp Ile Ile Ser Trp Asn Glu  
 35 40 45  
 Asp Gly Thr Thr Phe Ile Val Trp Arg Pro Ala Glu Phe Ala Arg Asp  
 50 55 60  
 Leu Leu Pro Asn Tyr Phe Lys His Asn Asn Phe Ser Ser Phe Val Arg  
 65 70 75 80  
 Gln Leu Asn Thr Tyr Gly Phe Arg Lys Ile Val Pro Asp Arg Trp Glu  
 85 90 95  
 Phe Ala Asn Glu Phe Phe Arg Arg Gly Glu Lys Lys Leu Leu Cys Glu  
 100 105 110  
 Ile His Arg  
 115

<210> 1106  
 <211> 37  
 <212> PRT  
 <213> Pinus radiata

<400> 1106  
 Met Gly Arg Ala Pro Cys Cys Thr Lys Val Gly Leu Asn Lys Gly Ala  
 1 5 10 15  
 Trp Ser Ala Glu Glu Asp Ser Leu Leu Gly Arg Tyr Ile Gln Thr His  
 20 25 30  
 Gly Glu Gly Asn Trp  
 35

<210> 1107  
 <211> 187  
 <212> PRT  
 <213> Pinus radiata

<400> 1107  
 Thr Arg Ser Gly Ser Lys Asn Ser Ala Arg Ala Pro Val Ser Gly Phe  
 1 5 10 15  
 Ser Met Asn Ser Asn Met Gly Val Ser Gly Gly Leu Asp Glu Ser Gly  
 20 25 30  
 Phe Ser Gln Pro Pro Pro Asn Phe Ala Lys Met Asn Ala Pro Thr Arg  
 35 40 45  
 Thr Phe Thr Lys Val Tyr Lys Leu Gly Ser Val Gly Arg Ser Val Asp  
 50 55 60  
 Val Thr Arg Phe Arg Gly Tyr Pro Asp Leu Arg Ala Glu Leu Asp Arg  
 65 70 75 80  
 Met Phe Gly Leu Glu Gly Gln Leu Glu Asn Pro Arg Ser Ser Trp Gln  
 85 90 95  
 Leu Val Phe Val Asp Lys Glu Lys Asp Val Leu Leu Leu Gly Asp Asp  
 100 105 110

Pro Trp Glu Glu Phe Val Asn Asn Val Arg Phe Ile Lys Ile Leu Ser  
 115 120 125  
 Pro Pro Glu Val Gln Gln Met Ser Gln Glu Asp Met Glu Phe Trp Ser  
 130 135 140  
 Ser Ile Pro Thr Gln Gln Thr Ser Ser Ser Asp Asp Cys Val  
 145 150 155 160  
 Ala Arg Asn Ser Ser Arg Asn Ile Arg Ser Val Leu Thr Ser Pro Gly  
 165 170 175  
 Ser Leu Asp Val Leu Ser Val Asp Pro Ile Val  
 180 185

<210> 1108  
 <211> 130  
 <212> PRT  
 <213> Pinus radiata

<400> 1108  
 His Asp Asn Glu Trp Lys Phe Arg His Ile Tyr Arg Gly Gln Pro Lys  
 1 5 10 15  
 Arg His Leu Leu Thr Thr Gly Trp Ser Val Phe Val Ser Ala Lys Arg  
 20 25 30  
 Leu Ser Ala Gly Asp Ala Val Leu Phe Ile Arg Asn Glu Lys Gly Gln  
 35 40 45  
 Leu Leu Leu Gly Ile Arg Arg Ala Asn Arg Ser Gln Thr Val Met Pro  
 50 55 60  
 Ser Ser Val Leu Ser Ser Asp Ser Met His Ile Gly Val Leu Ala Ala  
 65 70 75 80  
 Ala Ala His Ala Ala Ser Thr Asn Cys Arg Phe Thr Ile Phe Tyr Asn  
 85 90 95  
 Pro Arg Ala Ser Pro Ser Glu Phe Val Ile Pro Leu Ser Lys Tyr Glu  
 100 105 110  
 Lys Ala Val Tyr His Thr Arg Val Ser Ile Gly Met Arg Phe Arg Met  
 115 120 125  
 Leu Phe  
 130

<210> 1109  
 <211> 81  
 <212> PRT  
 <213> Pinus radiata

<400> 1109  
 Met Gly Arg Thr Pro Cys Cys Glu Lys Gly His Thr Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His  
 20 25 30  
 Gly Glu Gly Arg Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro His  
 50 55 60  
 Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Phe Ile Ile Lys  
 65 70 75 80  
 Leu

<210> 1110  
 <211> 146  
 <212> PRT  
 <213> Pinus radiata

<400> 1110

Met Gly Arg Ala Pro Cys Trp Asp Lys Met Gly Val Lys Lys Gly Ala  
 1 5 10 15  
 Trp Thr Leu Asp Glu Asp Lys Ile Leu Val Asp Tyr Ile Thr Lys His  
 20 25 30  
 Gly His Gly Asn Trp Arg Ala Leu Pro Lys Gln Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Lys Pro Asp  
 50 55 60  
 Ile Lys Arg Gly Asn Phe Ser Pro Glu Glu Glu Asp Gln Ile Ile Lys  
 65 70 75 80  
 Leu His Glu Leu Ile Gly Asn Arg Trp Ser Thr Ile Ala Ser Tyr Leu  
 85 90 95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Val Trp Asn Thr His Leu  
 100 105 110  
 Lys Lys Arg Leu Ala Arg Met Lys Ala Asp Ser Val Ala Val Asp Ala  
 115 120 125  
 Gln Pro Thr Pro Ala Ser Ser Leu Ala Ser Ser Thr Thr Glu Met Thr  
 130 135 140  
 Cys His  
 145

<210> 1111  
 <211> 72  
 <212> PRT  
 <213> Pinus radiata

<400> 1111  
 Cys Ile Glu Ala Asn Gly Gly Gly Ala Pro Gly Arg Ser Leu Pro Lys  
 1 5 10 15  
 Ala Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile  
 20 25 30  
 Asn Tyr Leu Arg Pro Asp Asp Val Lys Arg Gly Asn Phe Thr Glu Glu  
 35 40 45  
 Glu Asp Asp Leu Ile Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp  
 50 55 60  
 Ser Leu Ile Ala Gly Arg Leu Pro  
 65 70

<210> 1112  
 <211> 112  
 <212> PRT  
 <213> Pinus radiata

<400> 1112  
 Met Arg Arg Leu Arg Cys Glu Lys Gly Asn Thr Asn Lys Gly Ala Trp  
 1 5 10 15  
 Thr Gln Gln Glu Asp Ala Arg Leu Ile Ala Tyr Ile Arg Ala His Gly  
 20 25 30  
 Glu Gly Gly Trp His Ser Leu Pro Arg Ala Ala Gly Leu Arg Cys  
 35 40 45  
 Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asn Leu  
 50 55 60  
 Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Asp Leu Ile Ile Lys Leu  
 65 70 75 80  
 His Asn Leu Leu Gly Asp Lys Trp Ser Leu Ile Ala Gly Arg Leu Pro  
 85 90 95  
 Gly Arg Met Glu Asp Gln Ile Lys Asn Tyr Trp Asp Thr His Phe Lys  
 100 105 110

<210> 1113  
 <211> 148

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1113

Gly Lys Glu Val His Ile Ala Glu Pro Asp Gln Val Ser Asp Pro Pro  
 1 5 10 15  
 Lys Ala Ile Lys Tyr Glu Pro Pro Ala Val Ser Cys Asp Gln Glu Lys  
 20 25 30  
 Pro Leu Gln Lys Leu Ser Lys Glu Thr Gln Val Lys Gln His Gly Asn  
 35 40 45  
 Pro Thr Arg Ser Cys Thr Lys Val His Lys Gln Gly Ile Ala Leu Gly  
 50 55 60  
 Arg Ala Val Asp Leu Thr Lys Phe Glu Gly Tyr Glu Glu Leu Ile Cys  
 65 70 75 80  
 Glu Leu Glu Arg Met Phe Asn Ile Glu Gly Glu Leu Arg Asn Pro Ser  
 85 90 95  
 Lys Gly Trp Gln Val Val Tyr Thr Asp Asn Glu Gly Asp Met Met Leu  
 100 105 110  
 Val Gly Asp Asp Pro Trp Gln Glu Phe Cys Ser Ile Val Arg Lys Ile  
 115 120 125  
 Phe Ile Tyr Thr Arg Glu Glu Val Glu Lys Met Thr Pro Gln Lys His  
 130 135 140  
 Ala Lys Leu Gln  
 145

&lt;210&gt; 1114

&lt;211&gt; 273

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1114

Glu Thr Gln Ser Ser Asp Asn Asn Tyr Met Val Gly Phe Val Leu Ala  
 1 5 10 15  
 Asn Val Val Gly Leu Gln Tyr Tyr Thr Gly Thr Ile Asn Gly Arg Glu  
 20 25 30  
 Met Ile Arg Leu Val Arg Glu Pro Glu Asn Arg Tyr Asp Pro Asn Ala  
 35 40 45  
 Ile Lys Val Leu Asn Met Ser Gly Gln Gln Val Gly His Ile Glu Arg  
 50 55 60  
 Ala Val Ala Leu Ala Leu Ala Ser His Val Asp Gln Ser Leu Ile Leu  
 65 70 75 80  
 Ile Glu Gly Ile Val Ser Arg Ala Leu His Lys Gly Ala Tyr Lys Leu  
 85 90 95  
 Pro Cys Gln Ile Tyr Ile Phe Ser His Arg Asp Ser Met Gly Met Val  
 100 105 110  
 Leu Gln Leu Leu Lys Gly Ala Gly Leu Asn Val Ile Thr Ala Glu Asp  
 115 120 125  
 Gln Glu Phe Leu Thr Ala Glu Ser Ile Ala Ala Lys Glu Ile Tyr Glu  
 130 135 140  
 Asp Pro Gly Val Lys Glu Val Arg Arg Val Asp Asp Ile Phe Gly Ser  
 145 150 155 160  
 Leu Asn Asn Pro Lys Lys Arg Gln Ser Met Glu Ala Cys Glu Leu Val  
 165 170 175  
 Thr Ser Thr Leu Leu Gln His Gln Lys Glu Ala Leu Ala Trp Met Val  
 180 185 190  
 Gln Arg Glu Asn Ser Ser Glu Leu Pro Pro Phe Trp Asp Val Cys Asp  
 195 200 205  
 Lys Thr Ser Lys Ser Gln Gln Leu Arg Tyr Lys Asn Val Leu Thr Asn  
 210 215 220  
 Phe Glu Thr Asn Gly Arg Pro Lys Pro Leu Arg Gly Gly Ile Leu Ala  
 225 230 235 240

[illegible]

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<210> 1115
<211> 129
<212> PRT
<213> Pinus radiata
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[illegible]

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<210> 1116
<211> 90
<212> PRT
<213> Pinus radiata
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Met Asp Arg Glu Lys Leu Met Lys Met Ala Gly Ala Val Arg Thr Gly															
1				5					10					15	
Gly	Lys	Gly	Thr	Met	Arg	Arg	Lys	Lys	Lys	Thr	Ile	His	Lys	Thr	Ala
			20					25					30		
Thr	Ala	Asp	Asp	Lys	Arg	Leu	Gln	Ser	Thr	Leu	Lys	Arg	Ile	Gly	Val
		35					40					45			
Asn	Asn	Ile	Pro	Ala	Ile	Glu	Glu	Val	Asn	Ile	Phe	Lys	Asp	Asp	His
	50					55					60				
Val	Ile	His	Phe	Ala	Asn	Pro	Lys	Val	Gln	Ala	Ser	Ile	Ala	Ala	Asn
65					70					75					80
Thr	Trp	Val	Gly	Ser	Gly	His	Arg	Lys	Gln						
				85					90						

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<210> 1117
<211> 33
<212> PRT
<213> Pinus radiata
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<400> 1117  
Gly Lys Thr Gln Met Lys Leu Lys Arg Glu Arg Asp Gln Gln Ala Arg  
1 5 10 15  
Asp Ala Ser Lys Arg Arg Asn Gly Leu Lys Lys Ala Tyr Glu Leu  
20 25 30



Ser

<210> 1118  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

<400> 1118  
 Met Gly Arg Ala Pro Cys Cys Ala Asn Gly Asp Arg Ser Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Glu Asp Asp Arg Leu Thr Gln Tyr Ile Gln Ala His  
 20 25 30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
 50 55 60  
 Leu Lys Arg Gly Gly Phe Ser Glu Asp Glu Asp Leu Ile Leu Lys  
 65 70 75 80  
 Leu His Ala Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu  
 85 90 95  
 Pro Gly Arg Thr Gly His Gln Asn Gln Asn Tyr  
 100 105

<210> 1119  
 <211> 112  
 <212> PRT  
 <213> Pinus radiata

<400> 1119  
 Arg Lys Ser Asn Val His Ser Phe Cys Lys Thr Leu Thr Ala Ser Asp  
 1 5 10 15  
 Thr Ser Thr His Gly Gly Phe Ser Val Leu Arg Arg His Ala Asp Glu  
 20 25 30  
 Cys Leu Pro Pro Leu Asp Met Ser Gln Gln Pro Pro Ser Gln Glu Leu  
 35 40 45  
 Val Ala Arg Asp Leu His Gly Met Glu Trp Arg Phe Arg His Ile Phe  
 50 55 60  
 Arg Gly Gln Pro Arg Arg His Leu Leu Thr Thr Gly Trp Ser Val Phe  
 65 70 75 80  
 Val Ser Ser Lys Arg Leu Val Ala Gly Asp Ala Phe Ile Phe Leu Arg  
 85 90 95  
 Gly Glu Ser Gly Glu Leu Arg Val Gly Val Arg Arg Ala Met Arg Gln  
 100 105 110

<210> 1120  
 <211> 156  
 <212> PRT  
 <213> Pinus radiata

<400> 1120  
 Ala Leu Arg Glu Ala Ile Lys Asn Gly Ala Cys Pro Asn Cys Gly Gly  
 1 5 10 15  
 Ser Thr Ser Leu Gly Glu Met Pro Gly Phe Asp Glu His His Phe Arg  
 20 25 30  
 Ile Glu Asn Thr Arg Leu Lys Glu Glu Leu Asp Arg Val Ser Gly Ile  
 35 40 45  
 Ala Thr Lys Tyr Ile Gly Arg Ser Met Pro His Leu Ala Pro Ile Ala  
 50 55 60  
 Thr Pro Pro Met Leu Met Ser Ser Leu Glu Leu Ala Met Gly Ser Phe  
 65 70 75 80

Gly Gly Lys Gln Ser Gln Pro Ala Ala Pro Ser Val Asp Phe Ile Ser  
                                   85                                  90                                  95  
 Gly Pro Leu Ala Asp Gly Pro Ile Ile Asn Cys Gly Thr Leu Thr Asp  
                                   100                                  105                                  110  
 Leu Asp Lys Pro Leu Ala Leu Glu Leu Ala Met Asn Gly Val Glu Glu  
                                   115                                  120                                  125  
 Leu Ile Arg Met Ala Gln Thr Asp Glu Pro Leu Trp Leu Lys Asp Val  
                                   130                                  135                                  140  
 Asn Ala Gly Ser Val Lys Glu Leu Phe Glu Leu Gly  
                                   145                                  150                                  155

<210> 1121  
 <211> 116  
 <212> PRT  
 <213> Pinus radiata

<400> 1121  
 Gly Phe Phe Ile Phe Met Cys Arg Leu Pro Gly Arg Thr Leu Ala Asn  
   1                                  5                                  10                                  15  
 Gly Arg Leu Ile Trp Leu Cys Gln Ala Asn Glu Ala Asp Ser Lys Val  
                                   20                                  25                                  30  
 Phe Pro Arg Ala Leu Leu Ala Lys Ser Ala Ser Ile Gln Thr Val Val  
                                   35                                  40                                  45  
 Cys Ile Pro Leu Ala Asp Gly Val Leu Glu Phe Gly Thr Thr Glu Val  
                                   50                                  55                                  60  
 Glu Arg Glu Asp Pro Gly Leu Val Gln Arg Thr Ile Ser Phe Phe Leu  
   65                                  70                                  75                                  80  
 Glu Tyr Pro Lys Pro Ile Cys Ser Glu Gln Ser Thr Ser Ser Pro Gln  
                                   85                                  90                                  95  
 Cys Ser Asp Arg Asp Glu Lys Asp Gln Val Gly Met Val Thr Ile Met  
                                   100                                  105                                  110  
 Ser Ser Asp Ser  
                                   115

<210> 1122  
 <211> 104  
 <212> PRT  
 <213> Pinus radiata

<400> 1122  
 Phe Leu Phe Asp Ser Leu Asp Ala Val Asn Ile Asn Met Glu Ala Val  
   1                                  5                                  10                                  15  
 His Lys Ile Glu Lys Phe Leu Leu Ala Pro Lys Ile Asp Ala Thr Ile  
                                   20                                  25                                  30  
 Ser Ser Ala Ala Ala Pro Pro Trp Lys Thr Leu Phe Ala Ala Ala Gly  
                                   35                                  40                                  45  
 Phe Ser Pro Val Ala Phe Ser Asn Phe Thr Glu Thr Gln Ala Glu Tyr  
                                   50                                  55                                  60  
 Leu Ile Gln Arg Leu His Ser Arg Gly Phe Glu Val Glu Lys Ala His  
   65                                  70                                  75                                  80  
 Ala Ala Leu Leu Leu Gly Trp Gln Gly Arg Pro Leu Val Ser Ala Thr  
                                   85                                  90                                  95  
 Ala Trp Arg Cys Gly Pro Pro Pro  
                                   100

<210> 1123  
 <211> 169  
 <212> PRT  
 <213> Pinus radiata

<400> 1123

Glu Glu Lys Gln Leu Ser Ile Ser Gly Arg Asn Trp Gly Glu Val Asn  
 1 5 10 15  
 Leu Glu Gly Asn Met Leu Thr Phe Leu Val Gly Ser Lys Pro Ala Phe  
 20 25 30  
 Glu Val Ser Leu Ala Asp Val Ser Gln Thr Gln Leu Gln Gly Lys Asn  
 35 40 45  
 Asp Val Val Leu Glu Phe His Val Asp Asp Thr Thr Gly Ala Asn Glu  
 50 55 60  
 Lys Asp Ser Leu Met Glu Leu Ser Phe His Ile Pro Asn Ser Asn Thr  
 65 70 75 80  
 Thr Phe Ala Gly Asp Glu Ala Ser Pro Pro Ala Gln Ile Phe Arg Glu  
 85 90 95  
 Lys Ile Met Ser Met Ala Asp Val Gly Ser Ser Gly Gly Glu Ala Val  
 100 105 110  
 Ala Leu Phe Glu Asp Ile Ala Ile Leu Thr Pro Arg Gly Arg Tyr Thr  
 115 120 125  
 Ile Glu Leu His Leu Ser Phe Met Arg Leu Gln Gly Gln Ala Ser Asp  
 130 135 140  
 Phe Lys Ile Gln Tyr Ser Ser Val Leu Arg Leu Phe Val Leu Pro Lys  
 145 150 155 160  
 Ser Pro His Thr Leu Val Val Ile Thr  
 165

<210> 1124  
 <211> 124  
 <212> PRT  
 <213> Pinus radiata

<400> 1124  
 Leu Gly His Ser Gln Asn Phe Ser Thr Asp Val Asn Arg Met Pro Asp  
 1 5 10 15  
 Val Pro Pro Arg Arg Gly Gly His Arg Arg Ala Gln Ser Glu Ile Ala  
 20 25 30  
 Phe Arg Leu Pro Asp Asp Ile Met Phe Asp Gly Asp Leu Gly Phe Ala  
 35 40 45  
 Gly Phe Asp Met Pro Thr Val Ser Asp Asp Ala Thr Glu Ala Glu Asp  
 50 55 60  
 Leu Ile Ser Met Tyr Met Asp Met Glu Lys Leu Thr Ser Phe Gly Glu  
 65 70 75 80  
 Pro Leu Asn Ser Ala Ala Gly Glu Gly Ser Lys Leu Pro Ser Gly Ala  
 85 90 95  
 Glu Thr Asn Arg Pro Pro His His Ser Arg Ser Leu Ser Val Asp Ala  
 100 105 110  
 Val Phe Ser Gly Phe Glu Gly Asn Met Glu Asp Thr  
 115 120

<210> 1125  
 <211> 70  
 <212> PRT  
 <213> Pinus radiata

<400> 1125  
 Met Asp Arg Ser Ser Ser Glu Asp Ser Val Asp Ser Gln Gly Asp Val  
 1 5 10 15  
 Asn Ala Asn Tyr Lys Met Val Phe Ser Glu Asp Glu Lys Asp Leu Ile  
 20 25 30  
 Ser Arg Leu Tyr Asn Leu Leu Gly Gln Arg Trp Ala Leu Ile Ala Gly  
 35 40 45  
 Arg Ile Pro Gly Arg Thr Ala Glu Glu Ile Glu Lys Tyr Cys Ser Arg  
 50 55 60  
 Arg Tyr Ile Ser Glu Tyr

65

70

<210> 1126  
 <211> 120  
 <212> PRT  
 <213> Pinus radiata

<400> 1126  
 Gly Gly Glu Ile Arg Ile Leu Arg Gly Phe Phe Val Asn Gln Lys Thr  
 1 5 10 15  
 Asp Gly Gln Gly Ser Ser Phe Ala Ala Ser Ser Ser Arg Asn Ser Ser  
 20 25 30  
 Phe Ser Asn Gly Tyr Asp Asn Pro Gln Asn Thr Asn Lys Asn Ser Ser  
 35 40 45  
 Ser Gly Gly Thr Gly Asp Ala Gly Ser Phe Glu Cys Asn Ile Cys Leu  
 50 55 60  
 Glu Leu Ala Gln Asp Pro Ile Val Thr Leu Cys Gly His Leu Phe Cys  
 65 70 75 80  
 Trp Pro Cys Leu Tyr Lys Trp Leu His Gly His Ser Lys Ser Gln Glu  
 85 90 95  
 Cys Pro Val Cys Lys Ala Leu Val Glu Glu Asp Lys Ile Val Pro Leu  
 100 105 110  
 Tyr Gly Arg Gly Lys Val Gly Ser  
 115 120

<210> 1127  
 <211> 233  
 <212> PRT  
 <213> Pinus radiata

<400> 1127  
 Met Gly Ala Pro Lys Gln Lys Trp Thr Ser Glu Glu Glu Gly Ala Leu  
 1 5 10 15  
 Lys Ala Gly Val Glu Lys Tyr Gly Thr Gly Lys Trp Arg Thr Ile Gln  
 20 25 30  
 Lys Asp Pro Glu Phe Gly His Cys Leu Ala Ala Arg Ser Asn Val Asp  
 35 40 45  
 Leu Lys Asp Lys Trp Arg Asn Met Ser Val Ser Ala Ser Gly Gln Gly  
 50 55 60  
 Ser Arg Asp Lys Val Lys Thr Pro Arg Val Lys Ala Ile Ala Ser Leu  
 65 70 75 80  
 Pro Tyr Ser Ser Val Thr Ala Glu Ser Thr Ser Val Phe Ser Ile Glu  
 85 90 95  
 Ala Thr Thr Ser Thr Thr Pro Asp Asn Leu Ile Ser Pro Lys Ser Ser  
 100 105 110  
 Ser Asn Gly Lys Ile His Ser Pro Arg Tyr Asp Gly Met Ile Leu Glu  
 115 120 125  
 Ala Leu Thr Ser Met Gln Asp Pro Asn Gly Ile Asp Ile Ala Thr Ile  
 130 135 140  
 Ala Ser Phe Met Glu Glu Arg His Glu Leu Pro Pro Asn Phe Lys Arg  
 145 150 155 160  
 Ala Leu Gly Thr Lys Leu Arg Arg Leu Val Ala Gln Glu Lys Val Ile  
 165 170 175  
 Lys Ile Arg Asn Ser Tyr Lys Leu Lys Asp Met Thr Ser Thr Glu Val  
 180 185 190  
 Thr Ser Glu Val Leu Gly Ser Ala Ile Pro Ile Asp Asn Ser Met Gln  
 195 200 205  
 Tyr Ser Asn Ala Phe Thr Asn Thr Ile Asp Thr Phe Ser Val Asp Arg  
 210 215 220  
 Val Asn Glu Ala Ser Met Ala Ala Ala  
 225 230

<210> 1128  
 <211> 144  
 <212> PRT  
 <213> Pinus radiata

<400> 1128  
 His Ser Arg Pro Leu Ile Lys Glu Glu Ala Glu Ser Gly Asp Asn Ser  
 1 5 10 15  
 Ala Asn Ser Ala Asp Val Glu Thr Leu Leu Pro Gln Val Asp Glu Thr  
 20 25 30  
 Ala Ser Ala Asp Leu Thr Val Phe Pro Gly Phe Val Thr Pro Tyr Val  
 35 40 45  
 Pro Tyr Gly Phe Pro Ile Trp His Thr Phe Arg Pro Thr Ile Thr Gln  
 50 55 60  
 Thr Ser Asn Val Tyr Lys Pro Thr Ala Val Met Pro Thr Ala Pro Ile  
 65 70 75 80  
 Lys Met Asp Glu Cys Thr Gly Leu Ser Gln Leu Ser Leu Gly Gly Val  
 85 90 95  
 Ala Ala Ala Ser Ala Met Lys Pro Ser Glu Leu Ser Leu Lys Leu His  
 100 105 110  
 Gly Arg Pro Pro Ser Arg Gln Ser Ala Phe Gln Ala Lys Pro Ser Leu  
 115 120 125  
 Asn Glu Ser Ser Ser Leu Ser Ser Ser Ser Asn Val Ile Ser Val Val  
 130 135 140

<210> 1129  
 <211> 187  
 <212> PRT  
 <213> Pinus radiata

<400> 1129  
 His Pro Tyr Met Trp Gly Gly Gln Pro Leu Met Pro Pro Tyr Gly Thr  
 1 5 10 15  
 Pro Leu Pro Tyr Pro Ala Met Tyr Pro His Gly Gly Ile Tyr Ala His  
 20 25 30  
 Pro Ser Met Pro Pro Gly Ala Leu Pro Tyr Gly His Tyr Gly Met Pro  
 35 40 45  
 Ser Pro Gly Asn Ala Glu Val Thr Thr Thr Leu Ala Leu Pro Asn Ala  
 50 55 60  
 Glu Ala Glu Ala Lys Ser Ser Glu Gly Lys Glu Arg Asn Thr Met Lys  
 65 70 75 80  
 Arg Ser Lys Gly Ser Leu Gly Ser Leu Gly Met Ile Thr Gly Lys Gly  
 85 90 95  
 Gly Glu Gly Gly Lys Ala Thr Ser Gly Ser Ala Asn Glu Ala Met Ser  
 100 105 110  
 Gln Ser Gly Asp Ser Gly Ser Asp Gly Ser Ser Glu Gly Ser Glu Glu  
 115 120 125  
 Tyr Asn Thr Gln Thr Glu Ser Gln Val Ala Arg Lys Arg Ser Phe Asp  
 130 135 140  
 Gln Met Ile Val Asp Gly Ala Asn Ala Gln Ser Thr Asn Ile Gln Ser  
 145 150 155 160  
 Tyr Asn Ser Gln Ala Gly Glu Pro Tyr Val Thr Ser Gly Gly His Ala  
 165 170 175  
 Met Gly Asn Pro Ile Ser Gln Ala Val Ala Ala  
 180 185

<210> 1130  
 <211> 80  
 <212> PRT  
 <213> Pinus radiata

<400> 1130  
 Gly Lys Val Thr Ala Ser Gly Lys Val Thr Ser Gly Val Asn Asp Leu  
 1 5 10 15  
 Phe Trp Glu Gln Phe Leu Thr Glu Thr Pro Gly Ser Ala Thr Asp Thr  
 20 25 30  
 Gln Glu Ala Glu Ser Lys Ile Gln Glu Thr Arg Thr Lys Asp Gln Asp  
 35 40 45  
 Glu Arg Leu Pro Glu Asn Gly Lys Cys Trp Ser Asn Lys Gln Thr Leu  
 50 55 60  
 Asp Gln Leu Thr Glu Gln Met Gly Gln Leu Ala Ser Gly Thr Gln Thr  
 65 70 75 80

<210> 1131  
 <211> 96  
 <212> PRT  
 <213> Pinus radiata

<400> 1131  
 Met Asn Met Asp Ser Arg Gln Ser Gly Glu Glu Glu Asp Cys Asn Val  
 1 5 10 15  
 Thr Arg Pro Gly Gly Gly Gly Gly Ile Ser Leu His Val Ser Ser Val  
 20 25 30  
 Glu Tyr Cys Gln Lys Ser Ala Cys Val Ala His Asp Ile Ser Ser Asp  
 35 40 45  
 Glu Gln Asp Leu Ile Asn Arg Leu His Asn Leu Leu Gly Asp Arg Trp  
 50 55 60  
 Ala Leu Ile Ala Gly Arg Leu Pro Trp Arg Arg Arg Glu Glu Ile Glu  
 65 70 75 80  
 Asn Tyr Cys Lys Met Arg Tyr Thr Ala Thr Ser Ser Ser Arg Ser  
 85 90 95

<210> 1132  
 <211> 193  
 <212> PRT  
 <213> Pinus radiata

<400> 1132  
 Glu Arg Glu Arg Gly Arg Lys Pro Ala Asn Gly Arg Glu Glu Pro Leu  
 1 5 10 15  
 Asn His Val Glu Ala Glu Arg Gln Arg Arg Glu Lys Leu Asn Gln Lys  
 20 25 30  
 Phe Tyr Glu Leu Arg Ala Val Val Pro Asn Val Ser Lys Met Asp Lys  
 35 40 45  
 Ala Ser Leu Leu Gly Asp Ala Ala Ala Tyr Ile Lys Asp Leu Phe Ser  
 50 55 60  
 Lys Gln Gln Asp Leu Glu Ser Glu Arg Val Asp Met Gln Val Gln Ile  
 65 70 75 80  
 Asp Thr Ile Lys Lys Glu Leu Leu Met Asn Ser Leu Lys Leu Ala Ala  
 85 90 95  
 Lys Glu Ala Lys Asp Leu Ser Ser Ile Asp Leu Lys Gly Phe Ser Gln  
 100 105 110  
 Gly Lys Phe Pro Gly Leu Asn Ser Glu Val Arg Ile Val Gly Arg Glu  
 115 120 125  
 Ala Ile Ile Arg Ile Gln Cys Thr Lys His Asn His Pro Val Ala Arg  
 130 135 140  
 Leu Met Ile Ala Leu Gln Glu Leu Asp Leu Glu Val Leu His Ala Ser  
 145 150 155 160  
 Ile Ser Thr Val Lys Asp Ser Leu Ile Ile Gln Thr Val Ile Val Lys  
 165 170 175  
 Met Thr Arg Gly Leu Tyr Thr Glu Asp Gln Leu His Ala Leu Leu Cys

Lys 180 185 190  
 <210> 1133  
 <211> 88  
 <212> PRT  
 <213> Pinus radiata  
 <400> 1133  
 Met Ala Tyr Asn Arg Lys His Ala Ala Ala Thr Ser Pro Asp Ser  
 1 5 10 15  
 Ser Leu Gly Ser Asp Asn Glu Ser Gly Gly Gly Gly Gly Gly Gly  
 20 25 30  
 Gly Lys Gly Gln Ser Thr Lys Asn Gly Asn Gly Asn Tyr Ile Arg Glu  
 35 40 45  
 Gln Asp Arg Leu Leu Pro Ile Ala Asn Val Gly Arg Ile Met Lys Arg  
 50 55 60  
 Ala Leu Pro Gly Asn Ala Lys Ile Ser Lys Asp Ala Lys Glu Thr Val  
 65 70 75 80  
 Gln Glu Cys Val Ser Glu Phe Ile  
 85

<210> 1134  
 <211> 141  
 <212> PRT  
 <213> Pinus radiata

<400> 1134  
 Met Ala Thr Arg Asn Pro Phe Asp Leu Leu Glu Asp Asp Asp Asn Gly  
 1 5 10 15  
 Asp Pro Ser Ser Leu Leu Asp Thr Leu Ala Ala Ala Lys Asp Lys Pro  
 20 25 30  
 Ala Ala Val Ala Ala Lys Lys Gln Gln Pro Ala Val Ser Ala Ser Gly  
 35 40 45  
 Lys Leu Pro Thr Lys Pro Leu Pro Pro Ala Gln Ala Val Lys Glu Ser  
 50 55 60  
 Arg Val Ser Pro Asn Glu Gly Gly Arg Gly Arg Gly Gly Arg Gly  
 65 70 75 80  
 Gly Arg Gly Phe Gly Asn Arg Glu Ser Gln Glu Phe Gly Arg Gly Arg  
 85 90 95  
 Gly Gly Gly Tyr Asn Val Glu Arg Asn Phe Asn Arg Glu Asn Asn Ala  
 100 105 110  
 Tyr Ser Gly Ser Arg Val Gly Phe Tyr Asp Asn Asn Ser Asp Leu Ile  
 115 120 125  
 Pro Ser Arg Asn Glu Asp Gly Asp Gly Ala Ser Asn Asp  
 130 135 140

<210> 1135  
 <211> 43  
 <212> PRT  
 <213> Pinus radiata

<400> 1135  
 Met Pro Arg Val Lys Leu Ile Ser Arg Asn Phe Met Asp Met Val Ala  
 1 5 10 15  
 Ala Leu Pro Ala Ala Lys Leu Asp Arg Leu Tyr Asp Lys Ser Leu His  
 20 25 30  
 Leu Arg Ser Gly Leu Arg Ser Leu Thr Pro Val  
 35 40

<210> 1136  
 <211> 48  
 <212> PRT  
 <213> Pinus radiata

<400> 1136  
 Met Ala Glu Glu Met Asp Thr Pro Thr Lys Thr Thr Lys Thr Pro Thr  
 1 5 10 15  
 Ser Gln Glu Gln Thr Ser Thr Ser Thr Pro Val Ala Tyr Pro Glu Trp  
 20 25 30  
 Ala Ala Pro Ile Gln Ala Leu Tyr Asn Ser Gly Lys Thr Pro Leu Pro  
 35 40 45

<210> 1137  
 <211> 190  
 <212> PRT  
 <213> Pinus radiata

<400> 1137  
 Ser Phe Ser Ser Thr Arg Glu Ser Met Glu Arg Arg Asp Gln Ser Pro  
 1 5 10 15  
 Val Ala Ala Arg His Pro Met Arg Lys His Tyr Arg Gly Val Arg Gln  
 20 25 30  
 Arg Gln Trp Gly Lys Trp Val Ala Glu Ile Arg Leu Pro Gln Asn Arg  
 35 40 45  
 Thr Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala Glu Ala Ala Ala Leu  
 50 55 60  
 Ala Tyr Asp Arg Ala Ala Tyr Arg Trp Arg Gly Glu Cys Ala Arg Leu  
 65 70 75 80  
 Asn Phe Pro His Leu Phe Ser Lys Lys Tyr Gln Asn Ser Ser Pro Ser  
 85 90 95  
 Ser Thr Asn Gly Arg Ile Pro Arg Leu Ser Cys Glu Lys Ser Asp Gln  
 100 105 110  
 Lys Tyr Ala Tyr Asn Gly Asp Pro Val His Thr Asn Val Tyr Lys Gly  
 115 120 125  
 Pro Pro Ile Arg Ile Thr Ala Tyr Asn Gly Asp Pro Val Pro Ile Asp  
 130 135 140  
 Val Tyr Arg Ser Asp Pro Val Arg Val Ser Ala Tyr Thr Gly Asp Pro  
 145 150 155 160  
 Val Arg Ile Ser Ala Tyr Ser Gly Asp Pro Val Gly Asn Thr Val Thr  
 165 170 175  
 Leu Ala Glu Ser Glu Leu Glu Ser Ser Cys Ser His Glu Ser  
 180 185 190

<210> 1138  
 <211> 177  
 <212> PRT  
 <213> Pinus radiata

<400> 1138  
 Leu Asp Tyr Met Glu Glu Gln Asn Trp Asp Ile Asn Gly Ala Lys Tyr  
 1 5 10 15  
 Asp Gly Ser Glu Lys Trp Lys Ala His Ser Ser Glu Gln Lys Asp Leu  
 20 25 30  
 Gly Thr Ile Pro Thr Lys Val Glu Gly Arg Ile Gly Asn Arg Glu Asn  
 35 40 45  
 Ser Leu Asp Val Thr Arg Gly Ala Leu Trp Asp Ile Phe Arg Arg  
 50 55 60  
 Glu Asp Ile Pro Lys Leu Gln Asp Tyr Leu Leu Lys His Cys Gln Asp  
 65 70 75 80  
 Phe Arg His Ser Arg Asn Val Ser Val Asp Ser Val Val His Pro Ile



				85					90				95			
His	Asp	Gln	Thr	Phe	Tyr	Leu	Asn	Glu	Gly	His	Lys	Lys	Lys	Leu	Lys	
			100					105					110			
Glu	Glu	Tyr	Gln	Val	Glu	Pro	Trp	Thr	Phe	Glu	Gln	His	Leu	Gly	Glu	
		115					120					125				
Ala	Val	Phe	Ile	Pro	Ala	Gly	Cys	Pro	His	Gln	Val	Arg	Asn	Leu	Lys	
		130					135				140					
Ser	Cys	Ile	Lys	Val	Ala	Leu	Asn	Phe	Val	Ser	Pro	Glu	Asn	Leu	Gln	
145					150					155					160	
Glu	Cys	Ile	Arg	Leu	Glu	Asp	Glu	Leu	Arg	Leu	Leu	Pro	Lys	Asn	His	
				165				170						175		

Arg

<210> 1139  
 <211> 148  
 <212> PRT  
 <213> Pinus radiata

<400> 1139

Gly	Pro	Arg	Glu	Met	Thr	Glu	Glu	Glu	Arg	Glu	Thr	Lys	Lys	Ala	Ala	
1				5					10					15		
Ser	Val	Ala	Ala	Thr	Ala	Ala	Asp	Gln	Glu	Leu	Arg	Lys	Lys	Val	Leu	
		20						25					30			
Arg	Asp	Leu	His	Ala	Leu	Ile	Asn	Pro	Asn	Ala	Thr	Gly	Glu	Ala	Asp	
		35					40					45				
Pro	Ala	Glu	Phe	Pro	Gly	Asp	Asp	Ala	Thr	Val	Asp	Gly	Glu	Val	Thr	
		50				55					60					
Asp	Ala	Glu	Trp	Phe	Tyr	Leu	Val	Ser	Met	Met	Lys	Ser	Phe	Gly	Asn	
65				70					75					80		
Gly	Leu	Gly	Val	Pro	Gly	Gln	Ala	Phe	Cys	Gly	Gly	Met	Pro	Ile	Trp	
				85				90					95			
Ile	Ile	Gly	Ser	Glu	Lys	Leu	Gln	Ser	Tyr	Asn	Cys	Glu	Arg	Ala	Arg	
			100					105					110			
Gln	Ala	Gln	Gln	Phe	Gly	Ile	Gln	Thr	Met	Val	Cys	Ile	Pro	Thr	Pro	
		115					120					125				
Asn	Gly	Val	Val	Glu	Leu	Gly	Ser	Thr	Asp	Leu	Asn	Pro	Gln	Asn	Trp	
		130				135					140					

Asp Leu Ile Gln  
 145

<210> 1140  
 <211> 341  
 <212> PRT  
 <213> Pinus radiata

<400> 1140

Met	Cys	Gly	Gly	Ala	Ile	Ile	Lys	Glu	Phe	Ile	Pro	Ala	Asn	Arg	Ser	
1				5					10					15		
Arg	Arg	Val	Thr	Ala	Arg	Glu	Leu	Trp	Pro	Asp	Phe	Asp	Thr	Phe	Ala	
		20						25					30			
Glu	Phe	Ile	Asn	Gly	Gly	Ala	Thr	Gln	Glu	Thr	Phe	Asn	Lys	Pro	Gly	
		35					40					45				
Lys	Leu	Asp	Glu	Gly	Cys	Lys	Gln	Lys	Ser	Lys	Pro	Ser	Lys	Gly	Ser	
		50				55					60					
Val	Lys	Thr	Gln	Gln	Glu	Phe	Cys	Ser	Gly	Phe	Glu	Gly	Gly	Arg	Ser	
65				70					75					80		
Glu	Val	Ile	Pro	Pro	Leu	Glu	Asp	Val	Glu	Gly	Ser	Thr	Pro	Thr	Ile	
				85				90					95			
Gly	Gly	Arg	Lys	Arg	Lys	Asn	Val	Tyr	Arg	Gly	Ile	Arg	Gln	Arg	Pro	
			100					105					110			

Trp Gly Lys Trp Ala Ala Glu Ile Arg Asp Pro Ser Lys Gly Val Arg  
           115                          120                          125  
 Val Trp Leu Gly Thr Phe Asn Thr Ala Glu Glu Ala Ala Lys Ala Tyr  
           130                          135                          140  
 Asp Ala Ala Ala Lys Arg Ile Arg Gly Lys Lys Ala Lys Leu Asn Phe  
 145                          150                          155                          160  
 Ala Asp Asn Ser Cys Ser Val Lys Asn Asp Thr Ser Lys Lys Leu Ser  
                           165                          170                          175  
 Gly Lys Lys Gly Lys Leu Cys Ser Lys His Pro Ala Leu Leu Leu Glu  
                           180                          185                          190  
 Gly Phe Asn Ala Ser Cys Lys Val Lys Pro Ser Tyr Ser Ala Asn Pro  
           195                          200                          205  
 Asp Leu Leu Gly Gly Tyr Asn Ile Asn Arg Lys Val Lys Ala Ser Leu  
           210                          215                          220  
 Ser Gly Val Gly Lys Ser Asp Leu Thr Ile Cys Gly Tyr Asp Asp Met  
 225                          230                          235                          240  
 Glu Tyr Gly Asp Ser Gly Phe Ser Lys Pro Ser Ala Pro Phe Gln Asn  
                           245                          250                          255  
 Asn Ser Asn Ala Cys Thr Val Gln Phe Ser Glu His Ser Asn Leu Thr  
                           260                          265                          270  
 Gln Thr Ser Gln Lys Ser Cys Ser Cys Glu Ile Cys Ser His Asn Tyr  
           275                          280                          285  
 Ser Glu Met Ser Asn Val Met Pro Pro Ala Tyr Gly Asn Ala Val Asn  
           290                          295                          300  
 Phe Glu Pro Val Gln Thr Ser Asn Pro Gly Gly Tyr Phe Asp Ser Asp  
 305                          310                          315                          320  
 His Ser Ser Met Ser Phe Glu Gly Ala His Phe Pro Trp Ala Gln Glu  
                           325                          330                          335  
 Ile Lys Thr Pro Glu  
                           340

&lt;210&gt; 1141

&lt;211&gt; 181

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1141

Ala Lys Thr Leu His Pro Cys Trp Asp Ala Tyr Gln Leu Glu Asp Glu  
   1                          5                          10                          15  
 Arg Ala Ser Ala Val Tyr Ile Asn Val Phe Ser Gly Asp Ala Thr Thr  
           20                          25                          30  
 Glu Phe Pro Ser Ala Leu Gln Leu Gly Arg Gly Gly Ile Leu Ala Asp  
           35                          40                          45  
 Ala Met Gly Leu Gly Lys Thr Val Met Thr Ile Ser Leu Leu Leu Ala  
           50                          55                          60  
 Asn Ser Gly Lys Gly Gly Phe Ser Gly Met Asp Thr Val Glu Pro Phe  
 65                          70                          75                          80  
 Ser Ala Asn Ser Cys Ser Glu Lys Thr Ile Ile His Pro Tyr Asn Ile  
                           85                          90                          95  
 Gly Val Glu Leu Gly Pro Ser Gln Tyr Thr Asn Lys Thr Gln Gly Thr  
           100                          105                          110  
 Ser Met Leu Arg Arg Ser Ser Ser Gly Leu His Lys Gly Gly Gly Asn  
           115                          120                          125  
 Leu Ile Val Cys Pro Met Thr Leu Leu Ser Gln Trp Lys Thr Glu Leu  
           130                          135                          140  
 Glu Thr His Val Gln Ser Gly Thr Met Ser Val Tyr Val His Tyr Gly  
 145                          150                          155                          160  
 Gln Ser Arg Thr Lys Asp Val Lys Ser Leu Leu Gln His Asp Val Val  
                           165                          170                          175  
 Leu Thr Thr Tyr Gly  
                           180

<210> 1142  
 <211> 59  
 <212> PRT  
 <213> Pinus radiata

<400> 1142  
 Met Phe Val Gly Met Met Ser Glu Val Gly Ser Pro Thr Ser Gln Asp  
 1 5 10 15  
 Ser Arg Asn Ser Glu Asp Gly Glu Arg Glu Asn Cys Ala Val Arg Glu  
 20 25 30  
 Gln Asp Arg Phe Met Pro Ile Ala Asn Val Ile Arg Ile Met Arg Lys  
 35 40 45  
 Val Leu Pro Thr His Ala Lys Ile Ser Asp Asp  
 50 55

<210> 1143  
 <211> 133  
 <212> PRT  
 <213> Pinus radiata

<400> 1143  
 Met Gly Phe Glu Gln Thr Arg Gly Gly Gly Gly Gly Ala Lys Met Thr  
 1 5 10 15  
 Gln His Gln Val Thr Thr Glu Leu Val Arg Gln Ala Thr Glu Arg  
 20 25 30  
 Leu Arg Lys Leu Cys Arg Thr Gly Val Lys Val Glu Leu Arg Asp Phe  
 35 40 45  
 Phe Gln Leu Cys Ile Val Leu Ala Lys Ser Ile Asp Ser Ala Val Val  
 50 55 60  
 Tyr Asn Gln Ile Pro Thr Met Val His Glu Leu Pro Gln Leu Val Arg  
 65 70 75 80  
 Gln Val Phe Glu Arg Lys Asp Asp Ile Arg Leu Gln Pro Ala Ile Met  
 85 90 95  
 Val Leu Met Leu Ser Val Lys Asn Ala Cys Arg Ser Gly Trp Phe Arg  
 100 105 110  
 Val Thr Asp Thr Asp Glu Leu Leu Thr Met Ser Lys Glu Leu Ser Ser  
 115 120 125  
 Arg Phe Thr Ser Thr  
 130

<210> 1144  
 <211> 169  
 <212> PRT  
 <213> Pinus radiata

<400> 1144  
 Met Thr Arg Lys Cys Ser His Cys Gly Asn Asn Gly His Asn Ser Arg  
 1 5 10 15  
 Thr Cys Pro Asn Arg Gly Gly Val Lys Leu Phe Gly Val Arg Leu Thr  
 20 25 30  
 Asp Gly Pro Ile Arg Lys Ser Ala Ser Met Gly Asn Leu Met Met Met  
 35 40 45  
 Ser Asn Pro Ser Ser Pro Ala Asp Pro Ser Glu Pro Ala Ser Ala Ala  
 50 55 60  
 Ala Ala Ala Ala Ala Ala Ala Ser Gly Tyr Leu Ser Asp Gly Leu  
 65 70 75 80  
 Val Glu Ala Ser Thr Ser Ser Asn Ser Arg Glu Arg Lys Lys Gly Val  
 85 90 95  
 Pro Trp Thr Glu Glu His Arg Met Phe Leu Leu Gly Leu Gln Lys  
 100 105 110

Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asn Phe Val Ile Thr  
                   115                  120                  125  
 Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Phe Ile Arg  
                   130                  135                  140  
 Gln Ser Asn Met Thr Arg Lys Lys Arg Arg Ser Ser Leu Phe Asp Met  
 145                  150                  155                  160  
 Thr Pro Val Ser Phe Phe Phe Leu Ser  
                   165

<210> 1145  
 <211> 103  
 <212> PRT  
 <213> Pinus radiata

<400> 1145  
 Val Ser Ser Arg His Glu Phe Ala Val Ser Gln Met Ala Tyr Leu Gln  
   1                  5                  10                  15  
 Ala Leu Arg Asn Ala Gly Ala Thr Leu Arg Gln Phe Ala Glu Leu Glu  
                   20                  25                  30  
 Ser Met Glu Leu Gln Lys Thr Ser Pro Tyr Pro His Leu Arg His Tyr  
                   35                  40                  45  
 Arg Val Thr Leu Pro Pro Ser Pro Pro Pro Leu Pro Pro Pro Pro  
                   50                  55                  60  
 Pro Pro Pro Pro Leu Ser Leu Thr Pro Ser Pro Ser Tyr Gly Ser Ala  
 65                  70                  75                  80  
 Thr Phe Pro Ser Ser Ile Pro Val Asn Arg Ser Ile Tyr Arg Cys Pro  
                   85                  90                  95  
 Tyr Gln Gln Cys Ser Pro Ser  
                   100

<210> 1146  
 <211> 153  
 <212> PRT  
 <213> Pinus radiata

<400> 1146  
 Gln Leu Pro Asp Glu Ala Ile Ala Leu Ala Ala Ala Ser His Ile Glu  
   1                  5                  10                  15  
 Arg Glu Leu Gln Ile Thr Ser Trp Asn Leu Ser Cys Asn Phe Val Ala  
                   20                  25                  30  
 Ser Thr Leu Gln Gly Arg Glu Cys Ile Glu Arg Leu Glu Ile Thr Gly  
                   35                  40                  45  
 Ile Gly Asp Pro Ser Gly Arg Gly Leu Gly Phe Ser Tyr Leu Arg Val  
                   50                  55                  60  
 Ala Pro Lys Pro Pro Ile Ser Ser Ala Leu Val Lys Lys Lys Ala Ala  
 65                  70                  75                  80  
 Ala Ala Arg Gly Gly Ser Ala Val Thr Gly Thr Asp Ala Asp Leu Arg  
                   85                  90                  95  
 Arg Leu Ser Met Asp Ala Ala Arg Glu Val Leu Leu Lys Phe Asn Val  
                   100                  105                  110  
 Asp Glu Glu Gln Ile Glu Lys Met Thr Arg Trp His Arg Ile Ala Met  
                   115                  120                  125  
 Val Arg Lys Leu Ser Ser Glu Gln Ala Ala Ser Gly Val Lys Val Asp  
                   130                  135                  140  
 Ala Thr Ala Leu Asn Lys Phe Ala Arg  
 145                  150

<210> 1147  
 <211> 73  
 <212> PRT  
 <213> Pinus radiata

&lt;400&gt; 1147

Met Lys Ser Pro Ser Thr Ser Cys Leu Ser His Pro Val Glu Gly Glu  
 1 5 10 15  
 Gln Lys Ser Ile Asn Ser Glu Leu Trp His Ala Cys Ala Gly Pro Leu  
 20 25 30  
 Val Ser Leu Pro Ser Val Gly Ser Val Val Tyr Tyr Phe Pro Gln Gly  
 35 40 45  
 His Ser Glu Gln Val Ala Ala Ser Thr Gln Lys Val Ala Asp Thr His  
 50 55 60  
 Ile Pro Asn Tyr Pro Asn Leu Pro Tyr  
 65 70

&lt;210&gt; 1148

&lt;211&gt; 213

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1148

Leu Lys Val Gln Trp Asp Glu Ile Ser Ala Ile Ala Arg Pro Glu Arg  
 1 5 10 15  
 Val Ser Pro Trp Lys Leu Glu Pro Ser Leu Thr Pro Val Ala Val Asn  
 20 25 30  
 Pro Leu Pro Val Ala Arg Gly Lys Arg Pro Arg Pro Asn Ile Leu Pro  
 35 40 45  
 Ser Ser Ser Asp Leu Ser Val His Asp Lys Ala Pro Val Asp Ser Thr  
 50 55 60  
 Gln Val His Arg Phe Pro Arg Val Leu Gln Gly Gln Glu Val Met Thr  
 65 70 75 80  
 Leu Gly Gly Ser Leu Gly Asp Gly Glu Leu Glu Ser Gly Gln Lys Met  
 85 90 95  
 Val Ala Trp Gly Gly Ser Lys Leu Asp Asp Val Lys Ala Glu Gly Met  
 100 105 110  
 Gly Cys Gln Arg Arg Leu Val Ser Glu Asn Trp Met Pro Pro Leu Arg  
 115 120 125  
 His Asp Ser Leu Tyr Ser Asp Thr Phe Ser Ser Phe Gln Pro Val Gly  
 130 135 140  
 Glu Val Gln Glu Phe Arg Gly Ser Leu Thr Asn Ser Ile Leu Glu Asp  
 145 150 155 160  
 Gly Gln Gln Pro Lys Leu Ser Arg Lys Gln Phe Gln Asp Gln Glu Gly  
 165 170 175  
 Lys Ile Val Asp Gly Ser Gly Leu Trp Ser Met Ser Phe Pro Asn Ser  
 180 185 190  
 Leu Gln Leu Cys Glu Ser Asn Arg Lys Met Ser Ala Thr Ser Ala Ala  
 195 200 205  
 Gln Ser His Lys Gln  
 210

&lt;210&gt; 1149

&lt;211&gt; 217

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1149

Glu Leu Thr Ser Asp Ser His Arg Gln Ala Thr Leu Gln Leu Glu Ala  
 1 5 10 15  
 Glu Val Thr Ala Trp His Ile Ser Phe Cys Ser Leu Ile Lys Ser Gln  
 20 25 30  
 Gln Asp Tyr Ile Cys Ala Leu Tyr Glu Trp Ala Arg Leu Ser Leu Val  
 35 40 45  
 Gln Leu Gly Asn Glu Ala Gln Trp Glu Arg Gly Asn Arg Pro Pro Ile

50		55		60
Tyr Thr Leu Cys Asp Val Trp Gln Gln Val Leu Lys Arg Leu Pro Asp				
65		70		75
Lys Val Ala Ser Glu Ser Ile Lys Ser Phe Ile Ser Val Val His Ala				80
	85		90	95
Ile Val Met Gln Gln Ala Asp Glu Gln Lys Arg Lys Lys Lys Ala Glu				110
	100		105	
Asn Ile Ser Arg Glu Leu Gln Lys Lys Met Ile Ala Leu Arg Asn Ile				125
	115		120	
Glu Lys Lys Tyr Tyr Ser Ser Tyr Ser Ile Pro Ala Arg Ala Asp Ala				140
	130		135	
Thr Thr Glu Ser Gln Phe Glu Leu Gly His Thr Asp Pro Leu Ala Glu				160
145		150		155
Lys Arg Ala Glu Ile Glu Ile Tyr Lys Arg Arg Leu Glu Asp Glu Lys				175
	165		170	
Ala Asn Tyr Ser Lys Ser Ala Arg Gly Thr Arg Glu Met Thr Leu Asn				190
	180		185	
Asn Ile Gln Thr Gly Leu Pro Gly Leu Phe Gln Ala Leu Ser Ser Phe				205
	195		200	
Ser Ser Val Cys Ala Ser Ser Phe Glu				
210		215		

<210> 1150  
 <211> 33  
 <212> PRT  
 <213> Pinus radiata

<400> 1150
Met Ala Met Gly Glu Ala Glu Arg Ile Thr Gly Pro Trp Ser Pro Glu
1
Glu Asp Thr Ser Leu His Lys Leu Val Glu Lys Ser Gly Pro Arg Asn
20
25
30

Trp

<210> 1151  
 <211> 127  
 <212> PRT  
 <213> Pinus radiata

<400> 1151
Trp Arg Pro Ala Lys Phe Ala Arg Asn Leu Leu Pro Asn Tyr Phe Lys
1
Pro Asn Asn Phe Ser Ser Phe Gly Arg Gln Leu Asn Thr Tyr Gly Phe
20
25
30
Arg Lys Ile Val Pro Asp Arg Trp Glu Phe Ser Asn Glu Phe Phe Arg
35
40
45
Lys Gly Glu Lys Gln Leu Leu Ser Glu Ile His Arg Arg Lys Gly Leu
50
55
60
Ile Gln Pro Pro Pro Pro Pro Glu Asn Arg Ser Ile Ser Pro Ser Asn
65
70
75
80
Ser Gly Asp Glu Gln Thr Trp Ser Ser Thr Ser Ser Pro Asn Ser Ser
85
90
95
Thr Gly Val Asp Ala Leu Ser His Lys Asn Ala Ile Glu Glu Asn Glu
100
105
110
Lys Leu Arg Lys Glu Asn Leu Leu Val Ser Glu Leu Thr Gln
115
120
125

<210> 1152  
 <211> 104  
 <212> PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1152

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Pro His Gly Leu Gln His His Ser Ser Asp Asp Ala Asn Gly Asp Gly
 1          5          10          15
Asp Lys Arg Ile Gly Val Glu Thr Gly Ser Ser Val Cys Pro Glu Leu
 20          25          30
Trp His Ala Cys Ala Gly Pro Leu Ile Ser Leu Pro Pro Lys Gly Ser
 35          40          45
Arg Val Val Tyr Phe Pro Gln Gly His Leu Glu Gln Ile Ala Asp Asn
 50          55          60
Glu Leu His Arg Gly Gly Arg Gly Ser Phe Leu Asn Ile Asn His Ala
 65          70          75          80
Ala Ala Pro Met Ala Glu Glu Ala Ser Ser Ala Ala Ala Leu Asn Ile
 85          90          95
Pro Pro Ser Phe Ile Ser Gln Pro
100

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&lt;210&gt; 1153

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1153

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Glu Thr Leu Thr Leu Leu Lys Ile Arg Ser Glu Met Asp Ser Lys Phe
 1          5          10          15
Arg Glu Ala Thr His Lys Gly Pro Leu Trp Asp Glu Val Ser Arg Ala
 20          25          30
Leu Ala Glu His Gly Tyr Gln Arg Ser Ser Lys Lys Cys Arg Glu Lys
 35          40          45
Phe Glu Asn Leu Tyr Lys Tyr Tyr Lys Lys Thr Lys Glu Gly Lys Ala
 50          55          60
Gly Arg Gln Asp Gly Lys His Tyr Arg Phe Phe Ser Gln Leu Glu Ala
 65          70          75          80
Leu Tyr Gly Gly Thr Thr Ile Asp Ala Ala Asp Ser Cys Phe Gly Val
 85          90          95
Thr Thr Arg Thr Asn Leu Thr Glu Ser Pro Gly Leu Asp Phe Asn Gly
100          105          110
Asp Gly Ala Ser Gln Lys Tyr Ala Asp Thr His His Asn Ser Glu Gly
115          120          125
Phe Ser Leu Ser Ser Asp Ser Ser Ser Asp Asp Glu Tyr Ser His Asp
130          135          140
Ile Gln
145

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&lt;210&gt; 1154

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1154

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Ile Phe Tyr Arg Leu His Cys Asn Leu Gly Glu Lys Ser Asn Lys Ile
 1          5          10          15
Tyr Ile Cys Leu Phe Thr Met Glu Leu Ala Asp Glu His Ser Ile Leu
 20          25          30
Arg Tyr Lys Lys Pro Lys Leu Ser Lys Asn Val Val Ser Glu Arg Arg
 35          40          45
Arg Arg Gln Lys Met Asn Lys Leu Leu Tyr Thr Leu Arg Ala Leu Val
 50          55          60
Pro Asn Ile Ser Lys Met Asp Lys Ala Ser Ile Leu Ala Asp Ala Ile
 65          70          75          80

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Glu Tyr Val Glu Lys Leu Lys Gln Gln Val Glu Arg Ala Glu Ser Asp  
                     85                    90                    95  
 Val Gln Ser Thr Asn Val Ser Ala Leu  
                     100                    105

<210> 1155  
 <211> 83  
 <212> PRT  
 <213> Pinus radiata

<400> 1155  
 Arg Glu Phe Asn Ile Asn Ala Asp Val Tyr Ala Gln Asp Ser Ile Glu  
   1                    5                    10                    15  
 Leu Leu Lys Gln Ser Gly Ile Asp Phe Glu Lys Asn Glu Glu Lys Gly  
                     20                    25                    30  
 Ile Asp Ser His Arg Phe Gly Glu Leu Leu Met Ser Ser Gly Val Val  
                     35                    40                    45  
 Leu Asn Glu Asn Val Asn Trp Ile Thr Phe His Ser Gly Tyr Asp Phe  
                     50                    55                    60  
 Gly Tyr Leu Leu Lys Leu Leu Thr Cys Gln Asn Leu Pro Pro Glu Glu  
  65                    70                    75                    80  
 Ser Asp Phe

<210> 1156  
 <211> 170  
 <212> PRT  
 <213> Pinus radiata

<400> 1156  
 Met Ala Asn Arg Ser Leu Trp Gly Gly Ser Asp Phe Asp Tyr Glu Asn  
   1                    5                    10                    15  
 Glu Ala Asp Thr Arg Lys Gly Pro Trp Thr Val Glu Glu Asp Met Gln  
                     20                    25                    30  
 Leu Gly Ile Val Asn Leu His Gly Glu Gly Arg Trp Asn Phe Leu Ala  
                     35                    40                    45  
 Arg Ala Ser Gly Leu Gln Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp  
                     50                    55                    60  
 Val Asn Tyr Leu Arg Pro Asp Leu Lys Arg Ser Lys Ile Thr Pro Glu  
  65                    70                    75                    80  
 Glu Glu Arg Leu Ile Ile Glu Leu His Arg Arg Trp Gly Asn Arg Trp  
                     85                    90                    95  
 Ser Arg Ile Ala Gln Ser Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys  
                     100                    105                    110  
 Asn Phe Trp Arg Thr Arg Met Lys Gly Lys Leu Asn Ser Glu Thr Gln  
                     115                    120                    125  
 Lys Asp Ile Ala Gly Val Asp Ala Asp Asp Gly Val Gln Phe Glu Ser  
                     130                    135                    140  
 Glu Leu Gly Ser Cys Arg Leu Pro Val Ile Ser Ser His Ala Leu Pro  
  145                    150                    155                    160  
 Glu Val Asp Val Ala Glu Pro Ser Ser Thr  
                     165                    170

<210> 1157  
 <211> 119  
 <212> PRT  
 <213> Pinus radiata

<400> 1157  
 Gly Thr Val Gly Arg Lys Arg Arg Arg Ile His Arg Ser Ser Ile Gly  
   1                    5                    10                    15



Val Thr Gly Gly Arg Gly Leu Arg His Phe Ser Met Lys Val Cys Lys  
 20 25 30  
 Lys Val Glu Ser Lys Gly Trp Thr Thr Tyr Asn Glu Val Ala Ser Glu  
 35 40 45  
 Leu Val Ala Glu Phe Val Asn Pro Asn Ser Thr His Leu Ser Gln Asp  
 50 55 60  
 Gln Gln Gln Phe Asp Glu Lys Asn Ile Arg Arg Arg Val Tyr Asp Ala  
 65 70 75 80  
 Leu Asn Val Leu Met Ala Met Asp Ile Ile Ser Lys Glu Lys Lys Glu  
 85 90 95  
 Ile Arg Trp Lys Gly Leu Pro Thr Thr Asn Leu Ser Asp Ile Glu Arg  
 100 105 110  
 Leu Lys Thr Glu Arg Lys Arg  
 115

<210> 1158  
 <211> 97  
 <212> PRT  
 <213> Pinus radiata

<400> 1158  
 Cys Pro Arg Ala Phe Ala Arg Ala Tyr Asn Leu Lys Thr His Met Ala  
 1 5 10 15  
 Thr His Asp Pro Asn Arg Leu Lys Pro His Val Cys Pro His Arg Ser  
 20 25 30  
 Cys Ala Arg Ser Phe Ser Arg Lys His Asp Leu Gly Arg His Leu Val  
 35 40 45  
 Ser Ile His Arg Asp Asp Ser Val Val Ser Thr Pro Ser Ala Ser Met  
 50 55 60  
 Lys Ser Ile Gly Val Asp Ser Gly Arg Arg Ser Trp Cys Asp Asn Cys  
 65 70 75 80  
 Gly Lys Gly Thr Ile Gly Ala Ser Cys Gln Cys Ser Cys Ala Asp Ile  
 85 90 95  
 Lys

<210> 1159  
 <211> 162  
 <212> PRT  
 <213> Pinus radiata

<400> 1159  
 His Ala Pro Ile Phe Cys Arg Val Ala Arg Asn Phe Gln Leu Arg Val  
 1 5 10 15  
 Ile Leu Lys Glu Asn Arg Arg Arg Glu Thr Phe Asp Gly Phe Leu Arg  
 20 25 30  
 Glu Asp His Glu Lys Val Ser Gln Leu Val Thr Gln His Tyr Lys Val  
 35 40 45  
 Gln Leu Glu Thr Lys Glu Ile Ser Val Lys Gly Trp Asn Trp Gly Ser  
 50 55 60  
 Thr Asp Val Gln Gly Asn Asp Leu Ala Phe Val Val Ala Asn Arg Thr  
 65 70 75 80  
 Ala Phe Glu Val Pro Leu Arg Ser Ile Thr Asn Ser Asn Ile Ala Gly  
 85 90 95  
 Arg Thr Glu Val Ser Leu Glu Phe Ser Thr Ala Pro Ala Pro Ser Ala  
 100 105 110  
 Ser Lys Ser Lys Lys Gly Arg Pro Asp Glu Leu Thr Glu Ile Arg Phe  
 115 120 125  
 Tyr Val Pro Gly Thr His Thr Lys Asp Asp Asp Asp Glu Ala Asp Ile  
 130 135 140  
 Thr Lys Asp Asp Glu Glu Val Ser Ala Ala Gln Ala Phe His Asp Met

145  
Ile Lys

150

155

160

<210> 1160  
<211> 163  
<212> PRT  
<213> Pinus radiata

<400> 1160  
Gly Ser Gly Gly Val Lys Met Glu Asp His Ser Pro Val Ile Ile Asn  
1 5 10 15  
Ser Gln Ser Gly Tyr Cys Gln Ser Gln Gln Ser Ser Gln Met Pro Leu  
20 25 30  
Ala Gly Tyr Met Ser Pro His Gly Ile Pro Ile Gln His Thr Asp Asp  
35 40 45  
Ala Ala Ser Lys Glu Thr Gln Tyr Leu Arg Arg Arg Cys Phe Asn Cys  
50 55 60  
His Thr Thr Glu Pro Pro Ser Trp Arg Arg Ser Thr Leu Thr Pro Gly  
65 70 75 80  
Lys Ile Val Cys Asn Lys Cys Gly Leu Tyr Glu Arg Thr His Leu Arg  
85 90 95  
Pro Arg Pro Leu Arg Phe Asp Glu Leu Arg Ala Gly Asn Lys Ser Arg  
100 105 110  
Lys Gln Thr Lys Ser Ser Pro Lys Gly Ala Lys Val Ile Pro Pro Gly  
115 120 125  
Pro Leu Pro Ile Lys Lys Glu Pro Ala Glu Met Glu Ala Ile Ser Arg  
130 135 140  
Arg Met Ser Val Ser Ser Ser Ser Ala Gln Ser Gly Gly Gly Gly  
145 150 155 160  
Ser Ser Asp

<210> 1161  
<211> 148  
<212> PRT  
<213> Pinus radiata

<400> 1161  
Arg Asn Leu Leu Gly Ala Arg Ala Gln Pro Met Lys Leu Ser Ala Lys  
1 5 10 15  
Asn Asp Ser Lys Leu Gly Ile Ala Arg Pro Ala Lys Leu Tyr Arg Gly  
20 25 30  
Val Arg Gln Arg His Trp Gly Lys Trp Val Ala Glu Ile Arg Leu Pro  
35 40 45  
Arg Asn Arg Thr Arg Leu Trp Leu Gly Thr Phe Asp Thr Ala Glu Glu  
50 55 60  
Ala Ala Phe Ala Tyr Asp Thr Ala Ala Tyr Gln Leu Arg Gly Glu Tyr  
65 70 75 80  
Ala Arg Leu Asn Phe Pro Asp Leu Arg Tyr Leu Leu Leu Ser Asn Ser  
85 90 95  
Asp Asn Gly Ser His Asn Val Leu Ser Pro Pro Gly Asn Ala Leu Ser  
100 105 110  
Val Leu Lys Ser Ser Val Asp Ala Lys Leu Gln Ala Ile Cys Gln Arg  
115 120 125  
Leu Ser Gln Glu Asn Ser Ser Glu Asn Arg Leu Met Ala His Ser Ala  
130 135 140  
Asn Asn Glu Ala  
145

<210> 1162

<211> 48  
 <212> PRT  
 <213> Pinus radiata

<400> 1162  
 Phe Leu Glu Ala Leu Glu Lys Arg Glu Glu Asp Arg Met Met Arg Glu  
 1 5 10 15  
 Glu Ala Trp Lys Arg Gln Glu Met Ala Arg Leu Asn Lys Asp Gln Glu  
 20 25 30  
 Leu Arg Ser Gln Glu Arg Ser Met Ala Ala Ser Arg Asp Leu Ala Leu  
 35 40 45

<210> 1163  
 <211> 255  
 <212> PRT  
 <213> Pinus radiata

<400> 1163  
 Val Ala Leu Ser Asn Asn Pro Leu Ile Phe Ser Ala Lys Val Glu Asn  
 1 5 10 15  
 Gly Thr Pro Ser Tyr Asp Gly Leu Lys His Ala Asn Thr Asn Pro Met  
 20 25 30  
 Pro Phe Ser Gly Leu Gly Asn Val Ser Met Gly Pro Leu Phe Tyr Gln  
 35 40 45  
 Ala Asn Pro Ile Gln Arg Val Lys Arg Val Arg Asp Thr Ser Phe Ile  
 50 55 60  
 Met Gly Pro Pro Ser Ser Pro Phe Gly Arg Met Gly Val Asn Gly His  
 65 70 75 80  
 Met Gly Met Asn Asp Val Ser Lys Ser Leu Gln Pro Gly Phe Lys Ala  
 85 90 95  
 Arg Val Pro Tyr Pro Leu Gln Ala Ala Arg Ser Asp Ser Phe Val Ala  
 100 105 110  
 Gln Gly Cys Phe Pro Tyr Asp Pro Asn Leu Ser Ser Thr Ser Asn Leu  
 115 120 125  
 Pro Leu Gly Gly Phe Ser Ser Gly Ser His Ala Val Met Asn Gly Thr  
 130 135 140  
 Phe Ser Ser Ser Arg Leu Phe Ser Gly Gln Lys Leu Glu Leu Pro Ser  
 145 150 155 160  
 Ser Gln Phe Ala Glu Ser Val Gln Thr Ala Gly Ser Ser Ile Asn Pro  
 165 170 175  
 Val Leu Asn Arg Ser Thr Pro Leu Leu Leu Pro Pro Val Pro Thr Gln  
 180 185 190  
 Thr Ile Asn Gln Val Asp Tyr Ser Phe Ser Thr Pro Lys Asn Ser Gly  
 195 200 205  
 Leu Leu Glu Ser Met Phe Gln Glu Ala Gln Thr Met Gly Gly Val Lys  
 210 215 220  
 Ala His Ser Ser Ser Asn Ser Ser Ile Asp Leu Gln Gly Gly Ser Lys  
 225 230 235 240  
 Ser Ser Ile Ser Asn Pro Leu Asn Asn Gly Phe Leu Cys Arg Ser  
 245 250 255

<210> 1164  
 <211> 147  
 <212> PRT  
 <213> Pinus radiata

<400> 1164  
 Ile Arg Met Glu Glu Pro Leu Gln Ile Ile Asn Ser Ser Pro Ile Gln  
 1 5 10 15  
 Gln Gln His Asp His Asp Asp Asp Asp His Gly His Gly His Glu Glu  
 20 25 30

Glu Val Ile Pro His Pro Leu Leu Pro Pro Pro Gly Asp Thr Cys Ile  
           35                          40          45  
 Val Pro Tyr Ile Met Pro Val Ser Thr Ser Thr Ala Glu Lys His Pro  
       50                          55          60  
 Pro Gln Pro Thr Asn Ile Ala Phe Asn Gly Pro Glu Thr Glu Glu Asp  
       65                          70          75          80  
 Asp Lys Lys Arg Asp Arg Glu His Lys Lys Arg Ser Lys Asn Trp Thr  
                           85          90          95  
 Arg Val Glu Thr Leu Lys Leu Ile Lys Leu Arg Thr Glu Phe Glu Pro  
                           100          105          110  
 Arg Phe Ser Arg Ser Gly Arg Lys Thr Glu Leu Trp Asp Glu Ile Ala  
           115                          120          125  
 Glu Ser Leu Arg Lys Glu Gln Phe Phe Arg Asp Ala Gln Cys Arg  
       130                          135          140  
 Asp Lys Trp  
 145

<210> 1165  
 <211> 202  
 <212> PRT  
 <213> Pinus radiata

<400> 1165  
 Met Asp Gln Gln Gln Pro Thr Ile Pro Ala Leu Pro Gln Val Gly Tyr  
   1                          5          10          15  
 Gly Thr Asn Pro Tyr Ile Ala Pro Pro Ile Gly Gly Pro Pro His Pro  
           20                          25          30  
 Gln Leu Ala Ser Tyr His Gln Gln Leu Gln Ala Phe Trp Gly Asn Gln  
       35                          40          45  
 Met Arg Glu Val Glu Gln Ala Gln Asp Phe Lys Thr His Ser Leu Pro  
       50                          55          60  
 Leu Ala Arg Ile Lys Lys Ile Met Lys Ala Asp Glu Asp Val Lys Met  
       65                          70          75          80  
 Ile Ser Ala Glu Ala Pro Val Val Phe Ala Lys Ala Cys Glu Met Phe  
           85                          90          95  
 Ile Leu Glu Leu Thr Leu Arg Ser Trp Ile His Thr Glu Glu Asn Lys  
           100                          105          110  
 Arg Arg Thr Leu Gln Lys Asn Asp Ile Ala Ala Ala Ile Gly Arg Thr  
           115                          120          125  
 Asp Ile Phe Asp Phe Leu Val Asp Ile Val Pro Arg Asp Glu Phe Lys  
       130                          135          140  
 Asp Glu Gly Leu Val Ile Pro Arg Ala Ala Gly Ala Val Pro Phe Met  
       145                          150          155          160  
 Gly Pro Gly Asp Asn Val Pro Ser Tyr Tyr Tyr Val Ala Gln Gln Ala  
           165                          170          175  
 Pro Asn Val Ala Ala Tyr Ala Pro Pro Thr Gln Gln Met Arg Ser Lys  
           180                          185          190  
 Ala Pro Ala Pro Pro Pro His Gly Ser Ser  
       195                          200

<210> 1166  
 <211> 143  
 <212> PRT  
 <213> Pinus radiata

<400> 1166  
 Gln Gly Ser Leu Thr Leu Pro Arg Thr Leu Ser Arg Arg Thr Val Asp  
   1                          5          10          15  
 Asp Val Trp Arg Glu Ile His Lys Glu Asn Ile Asp Gly Asn Gly Asn  
           20                          25          30  
 Ala Pro Ala Asn Gln Ala Arg Gln Pro Thr Phe Gly Glu Met Thr Leu

	35					40				45					
Glu	Asp	Phe	Leu	Val	Lys	Ala	Gly	Val	Val	Arg	Glu	Asp	Ala	Glu	Gln
	50					55					60				
Gly	Asp	Gly	Gln	Ser	Phe	Gly	Ala	Phe	Arg	Asn	Ala	Leu	Asp	Gly	Glu
65					70					75				80	
Phe	Val	Ala	Asn	Leu	Ala	Glu	Arg	Asn	Gly	Asp	Asn	Arg	Leu	Gly	Ile
			85						90					95	
Gly	Asn	Ser	Leu	Gly	Leu	Gly	Phe	Gly	Glu	Arg	Gly	His	Arg	Asn	Gly
			100					105					110		
Glu	Val	Gly	Ser	Asn	Lys	Ser	Gly	Ala	Gly	Gly	Val	Pro	Gly	Leu	Ser
		115					120					125			
Leu	Ser	Pro	Thr	Asn	Val	Phe	Leu	Ile	Met	Leu	Pro	Trp	Ile	Trp	
	130						135					140			

<210> 1167  
 <211> 90  
 <212> PRT  
 <213> Pinus radiata

Phe	Gln	Arg	Arg	Lys	Lys	Lys	Ser	Ile	Gly	Arg	Gly	Cys	Leu	Lys	Thr
1				5					10					15	
Ser	Ile	Asn	Asp	Val	Glu	Gln	Leu	Lys	Ala	Glu	Lys	Leu	Leu	Leu	Lys
			20					25					30		
Ser	Arg	Ile	Glu	Lys	Lys	Ala	Ser	Tyr	Phe	His	Glu	Leu	Glu	Glu	Gln
		35					40					45			
Ile	Ile	Gly	Leu	Gln	Asn	Leu	Val	Lys	Arg	Asn	Glu	His	Arg	Tyr	Ser
	50				55					60					
Ser	Gly	Asn	Thr	Pro	Ser	Gly	Gly	Val	Ser	Leu	Pro	Phe	Ile	Leu	Val
65					70					75				80	
Gln	Thr	His	Pro	Arg	Ala	Thr	Val	Glu	Ile						
				85					90						

<210> 1168  
 <211> 105  
 <212> PRT  
 <213> Pinus radiata

Gly	Ile	Arg	Arg	Ala	Thr	Arg	Gln	Lys	Ser	Gly	Ile	Leu	Ser	Ser	Val
1				5					10					15	
Leu	Ser	Asn	Gln	Asn	Ala	His	Leu	Ser	Val	Leu	Ala	Ala	Ala	Ala	Ser
			20					25					30		
Ala	Val	Ala	Thr	Lys	Ser	Met	Phe	His	Val	Phe	Tyr	Asn	Pro	Arg	Thr
		35					40					45			
Ser	Pro	Ala	Glu	Phe	Ile	Ile	Pro	Tyr	Gln	Lys	Tyr	Val	Lys	Ser	Cys
	50					55					60				
Lys	Gln	Pro	Leu	Ser	Ile	Gly	Met	Arg	Phe	Lys	Met	Arg	Phe	Glu	Thr
65					70					75				80	
Glu	Asp	Thr	Ala	Glu	Arg	Arg	Tyr	Thr	Gly	Met	Ile	Thr	Ala	Ile	Gly
				85					90					95	
Asp	Ala	Asp	Pro	Ala	Arg	Trp	Pro	Gly							
			100					105							

<210> 1169  
 <211> 106  
 <212> PRT  
 <213> Pinus radiata

Gln	Asp	Thr	His	Ser	Glu	Pro	Met	Ala	Met	Glu	Met	Gly	Leu	Val	Ile

```

      1           5           10           15
Asp Gly Asp Arg Phe Ser Ser Glu Gly Asp Gly Asp Ile Met Leu Asp
      20           25           30
Gly Glu Asp Leu Leu Pro Glu Ile Asn Asp Met Phe Trp Glu Gln Phe
      35           40           45
Leu Ala Glu Ser Ala Thr Ser Gly Gly Thr Glu Glu Ala Glu Ser Ala
      50           55           60
Ala Gln Glu Ser Leu Thr Lys Asp Gln Asp Glu Lys Pro Ser Glu Asn
      65           70           75           80
Gly Asn Trp Trp Lys Lys Asn Gln Asn Met Asp Asn Leu Thr Glu Gln
      85           90           95
Met Gly Gln Leu Ala Ser Glu Ser Asn Pro
      100           105

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<210> 1170  
 <211> 144  
 <212> PRT  
 <213> Pinus radiata

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      <400> 1170
Asp Gly Ala Val Arg Asp Ala Gly Arg Leu Val Pro Ala Pro Phe Leu
      1           5           10           15
Val Lys Met Tyr Arg Leu Val Asp Asp Pro Ser Thr Asn His Ile Val
      20           25           30
Ser Trp Gly Glu Asn Asn Asn Ser Phe Val Val Trp Arg Pro Lys Glu
      35           40           45
Phe Ser Ala Ser Val Leu Pro Cys Tyr Phe Asn His Ala Asn Phe Ser
      50           55           60
Ser Phe Val Arg Gln Leu Asn Asn Tyr Gly Phe Arg Lys Thr Phe Arg
      65           70           75           80
Gly Gln Cys Glu Phe Ser Asn Lys Leu Phe Glu Lys Gly Lys Gln Tyr
      85           90           95
Leu Leu Cys His Ile His Arg Arg Arg Ala Ser Asn Ser Ser Pro Met
      100           105           110
Pro Met Glu Tyr Gly Lys Ser Ser Leu Leu Phe Pro Ile Ile Leu Pro
      115           120           125
Thr Gln His Ser Asn Val Leu Ala Ala Pro Leu Pro Ser Ser Leu Ser
      130           135           140

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<210> 1171  
 <211> 62  
 <212> PRT  
 <213> Pinus radiata

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      <400> 1171
Lys Glu Arg Ile Leu Thr Glu Glu Asn Leu Phe Leu Arg Lys Lys Cys
      1           5           10           15
Gly Asp Glu His Val Asp Cys Ser Ala Phe Arg Thr Pro Pro Ala Gln
      20           25           30
Leu Arg Ser Ile Gln Asn Ile Asp Val Glu Thr Gln Leu Val Ile Arg
      35           40           45
Pro Pro Thr Val Gln Gln His Pro Asp Val Asp Ser Pro Arg
      50           55           60

```

<210> 1172  
 <211> 88  
 <212> PRT  
 <213> Pinus radiata

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      <400> 1172
Asp Pro Asn Ala Pro Lys Lys Ala Met Thr Gly Phe Met Phe Phe Ser

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      1           5           10           15
Gln Val Glu Arg Glu Asn Leu Lys Lys Ser Asp Pro Gly Met Ala Phe
      20           25           30
Thr Asp Val Gly Arg Thr Leu Gly Glu Arg Trp Lys Lys Met Ser Ala
      35           40           45
Glu Glu Lys Ala Pro Tyr Glu Ser Lys Ala Arg Ala Asp Lys Glu Arg
      50           55           60
Tyr Lys Glu Ala Met Ala Asp Tyr Lys Ser Gly Pro Thr Asn Val Asp
      65           70           75           80
Ser Gly Asn Glu Ser Asp Ser Glu
      85

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<210> 1173
<211> 106
<212> PRT
<213> Pinus radiata

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      <400> 1173
Leu Leu Phe Gly Val Asn Ile Asp Ser Ser Ser Leu Ile Val Pro Asn
      1           5           10           15
Thr Val Ser Asn Met Arg Ser Ile Gly Ser Ser Thr Asp Ala Val Met
      20           25           30
Gln Phe Gly Val Ser Asn Tyr Leu Asn Ala Pro Pro Cys Ala Ser Gly
      35           40           45
Ser Asn Ile Ser Leu Asn Ser Asp Ile Ser Ala Ser Ala Cys Leu Asp
      50           55           60
Glu Ser Gly Leu Leu Pro Ala Glu Asn Leu Gly Gln Met Asn Ala
      65           70           75           80
Pro Thr Arg Thr Phe Ile Lys Val Tyr Lys Gln Gly Ser Val Gly Arg
      85           90           95
Ser Leu Asp Ile Ser Arg Phe Ser Ser Tyr
      100           105

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<210> 1174
<211> 108
<212> PRT
<213> Pinus radiata

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```

      <400> 1174
Met Ala Thr Thr Arg His Gln Arg Ser Pro Asp Ser Ser Pro Arg Ser
      1           5           10           15
Glu Asp Glu Ser Gly Ala His Thr Tyr Ser Asn Gln Asp Gly Ser Val
      20           25           30
Lys Glu Gln Asp Arg Phe Leu Pro Ile Ala Asn Val Ser Arg Ile Met
      35           40           45
Lys Lys Ala Leu Pro Ala Asn Ala Lys Ile Ser Lys Asp Ala Lys Glu
      50           55           60
Thr Val Gln Glu Cys Val Ser Glu Phe Ile Ser Phe Ile Thr Gly Glu
      65           70           75           80
Ala Ser Asp Lys Cys Gln Arg Glu Lys Lys Lys Thr Ile Asn Gly Asp
      85           90           95
Asp Leu Leu Trp Ala Met Gly Thr Leu Gly Phe Glu
      100           105

```

```

<210> 1175
<211> 137
<212> PRT
<213> Pinus radiata

```

```

      <400> 1175
Lys Ser Asp Tyr Arg Asp Ser Asp Asp Glu Gly Gly Gly Thr Val Arg

```

1				5					10					15			
Glu	Gly	Lys	Asp	Leu	Gln	Thr	Ser	Asn	Phe	Ile	Asp	Tyr	Phe	Gly	Gln		
			20					25					30				
Ser	Asn	His	Thr	Glu	Glu	Ala	Glu	Asn	Glu	His	Asp	Ala	Ser	Val	Asp		
		35					40					45					
Thr	Lys	Gly	Pro	Leu	Glu	Ser	Ser	Asn	Glu	Val	Gly	His	Pro	Thr	Thr		
	50					55					60						
Tyr	Pro	Glu	Ser	Ser	Ser	Leu	Ser	Ala	Gln	Gly	Ser	Glu	Pro	Arg	Val		
65				70					75						80		
Phe	Ser	Cys	Asn	Tyr	Cys	Gln	Arg	Lys	Phe	Tyr	Ser	Ser	Gln	Ala	Leu		
			85						90					95			
Gly	Gly	His	Gln	Asn	Ala	His	Lys	Arg	Glu	Arg	Thr	Leu	Ala	Lys	Arg		
			100					105						110			
Gly	Gln	Arg	Ile	Gly	Ala	Phe	Gln	His	Arg	Tyr	Ile	Ser	Met	Ala	Ser		
		115					120					125					
Leu	Pro	Leu	His	Gly	Ser	Thr	Glu	Ser									
	130					135											

&lt;210&gt; 1176

&lt;211&gt; 206

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1176

Ser	Arg	Gly	Lys	Ala	Leu	Lys	Leu	Phe	Gly	Phe	Glu	Phe	Arg	Gly	Ser		
1				5				10					15				
Glu	Gly	Gly	Ser	Phe	Glu	Gly	Thr	Asn	Gly	Ser	Asp	Gln	Pro	Gln	Asp		
			20					25				30					
Gly	Thr	Asn	Ile	Leu	Thr	Ala	Gly	Glu	Ala	Ser	Thr	Glu	Pro	Val	Glu		
		35				40					45						
Glu	Glu	Leu	Val	Ile	Glu	Ala	Lys	Asn	Gly	Asp	Ser	Gly	Lys	Leu	Glu		
	50					55				60							
Asp	Val	Gly	Ser	Pro	Val	Glu	Ala	Gly	Glu	Ser	Gly	Ser	Thr	Ser	Asn		
65				70					75						80		
Cys	Leu	Gly	Ser	Ser	Ala	Gln	Glu	Asn	Arg	Lys	Tyr	Glu	Cys	Gln	Tyr		
			85					90						95			
Cys	Cys	Arg	Glu	Phe	Ala	Asn	Ser	Gln	Ala	Leu	Gly	Gly	His	Gln	Asn		
			100					105						110			
Ala	His	Lys	Lys	Glu	Arg	Gln	Gln	Ala	Lys	Arg	Ala	His	Leu	Leu	Ala		
		115				120						125					
Thr	Arg	Ser	Ala	Ala	Ala	Ser	Ala	Asn	Arg	Ser	Gly	Ala	Thr	Ala	Trp		
	130					135					140						
Cys	Gly	Asn	Ile	Asn	Gly	Asn	Leu	Tyr	His	Arg	Asn	Phe	Leu	Phe	Asn		
145				150					155						160		
Asn	Ser	Tyr	Phe	Thr	Arg	Met	Gln	Val	Phe	Gln	Glu	Asp	Phe	Pro	Thr		
			165					170						175			
Phe	Gln	Thr	Pro	Gln	Ala	Val	Ala	Ala	Pro	Ser	Ile	Pro	His	Tyr	Ile		
		180					185						190				
Phe	Ser	Tyr	Gln	Gln	Gln	Gln	Gln	Ala	Pro	Val	Gln	Ser	Arg				
	195						200					205					

&lt;210&gt; 1177

&lt;211&gt; 116

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1177

Val	Pro	Glu	Asn	Ser	Lys	Gln	Ile	Ile	Asn	His	Gly	Leu	Ile	Leu	Pro		
1				5				10					15				
Glu	Met	Gly	Ser	Val	Asp	Ser	Gly	Arg	Glu	Gly	Thr	Arg	Ala	Ile	Leu		
			20					25					30				



Ser Asp Asp Cys Val Lys Phe Glu Cys Arg Tyr Cys Cys Arg Val Phe  
                   35                                  40                                  45  
 Pro Thr Ser Gln Ala Leu Gly Gly His Gln Asn Ala His Lys Arg Glu  
                   50                                  55                                  60  
 Arg Arg Arg Ala Met Thr Arg Phe Gln Arg Ser Pro Ser Asp Ser Ser  
 65                                  70                                  75                                  80  
 Asn Tyr Ser Gly Lys Gln Asn Ser Ile Asp Leu Phe Ser Arg Glu Arg  
                                   85                                  90                                  95  
 Val Pro Gly Ser Ser Leu Leu Ser Pro His Gly Thr Arg Asp His Val  
                                   100                                  105                                  110  
 Val Cys Ser Asp  
                   115

<210> 1178  
 <211> 122  
 <212> PRT  
 <213> Pinus radiata

<400> 1178  
 Lys Lys Ala Ser Glu Trp Gly Glu Ser Val Val Ser Thr Ser Glu Asn  
   1                                  5                                  10                                  15  
 Ser Asn Asp Leu Asp Pro Pro Thr Tyr Ser Glu Thr Ser Ser Pro Ala  
                   20                                  25                                  30  
 Gln Gly Ser Asp Pro Arg Val Phe Pro Cys Asn Phe Cys Gln Ser Lys  
                   35                                  40                                  45  
 Phe Tyr Ser Ser Gln Ala Leu Gly Gly His Gln Asn Ala His Lys Arg  
                   50                                  55                                  60  
 Glu Arg Thr Leu Ala Arg Arg Ala Gln Arg Met Gly Ser Phe Ala Gln  
 65                                  70                                  75                                  80  
 Arg Tyr Ser Ser Met Ala Ser Leu Pro Leu His Gly Ser Ser Glu Thr  
                                   85                                  90                                  95  
 Ser Trp Thr Pro Ser Arg Phe Leu Gly Ile Lys Ala His Ser Leu Ile  
                                   100                                  105                                  110  
 His Lys Pro Phe Pro Glu Gly Asp Asn Leu  
                   115                                  120

<210> 1179  
 <211> 113  
 <212> PRT  
 <213> Pinus radiata

<400> 1179  
 Met Thr Gln Ala Thr Asn Tyr Thr Ala Gly Thr Ile Arg Asp Asp Gln  
   1                                  5                                  10                                  15  
 Glu Glu Gln Cys Val Arg Arg Gly Pro Trp Thr Val Asp Glu Asp Met  
                   20                                  25                                  30  
 Ser Leu Ile Arg Cys Val Thr Thr Arg Gly Glu Gly Arg Trp Asn Thr  
                   35                                  40                                  45  
 Val Ala Lys Phe Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu  
                   50                                  55                                  60  
 Arg Trp Leu Asn Tyr Leu Arg Pro Asp Val Lys Arg Gly Asn Ile Thr  
 65                                  70                                  75                                  80  
 Pro Glu Glu Gln Leu Leu Ile Leu Glu Leu His Arg Leu Trp Gly Asn  
                                   85                                  90                                  95  
 Arg Trp Ser Lys Ile Ala Arg Gln Leu Pro Gly Arg Thr Asp Asn Glu  
                                   100                                  105                                  110  
 Ile

<210> 1180  
 <211> 76

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1180

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Met Arg Arg Pro Gln Arg Lys Lys Lys Thr Asp Ala Glu Asp Asp Phe
 1          5          10          15
Asp Glu Cys Tyr Tyr Thr His Met Cys Lys Ile Cys Lys Lys Phe
      20          25          30
Val Ser Gly Arg Ala Phe Gly Gly His Met Arg Ile His Gly Pro Val
      35          40          45
Ala Thr Ala Ala Ala Ala Ala Ala Glu Ser Asn Gly Lys Asn Leu Glu
      50          55          60
Pro Gln Arg Lys Arg Ser Arg Ala Glu Glu Ile Arg
      65          70          75

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&lt;210&gt; 1181

&lt;211&gt; 130

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1181

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Val Gly Cys Lys Gly Ser Asp Ala Phe Glu Glu Ser Leu Lys His Phe
 1          5          10          15
Cys Arg Val Cys Lys Arg Arg Phe Ala Cys Gly Arg Ala Leu Gly Gly
      20          25          30
His Met Arg Val His Gly Ala Glu Leu Gly Ala Ile Lys Gly Gly Gly
      35          40          45
Leu Glu Glu Gln Phe Glu Lys Gly Arg Val Lys Glu Pro Ser Arg Ser
      50          55          60
Cys Gly Asp Ser Val Lys Glu Gly Val Gln Asp Glu Val Glu Gly Leu
      65          70          75          80
Asn Ser Met Tyr Thr Leu Arg Arg Asn Pro Lys Arg Ser Trp Arg Phe
      85          90          95
Ala Asp Gln Asp Tyr Ser Phe Ala Phe Gly Gly Val Asp Gly Ser Gly
      100          105          110
Ala Lys Arg Phe Gly Ser Thr Phe Leu Arg Asp Ser Arg Val Cys Glu
      115          120          125
Glu Cys
      130

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&lt;210&gt; 1182

&lt;211&gt; 86

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 1182

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Arg Asn Tyr Leu Gly Glu Tyr Thr Gly Glu Leu Ile Ser His Arg Glu
 1          5          10          15
Ala Asp Lys Arg Gly Lys Ile Tyr Asp Arg Glu Asp Ser Ser Phe Leu
      20          25          30
Phe Asn Leu Asn Asp Gln Tyr Val Leu Asp Ala Tyr Arg Lys Gly Asp
      35          40          45
Lys Leu Lys Phe Ala Asn His Ser Pro Thr Pro Asn Cys Tyr Ala Lys
      50          55          60
Val Ile Met Val Ala Gly Asp His Arg Val Gly Ile Phe Ala Lys Glu
      65          70          75          80
Arg Ile Ala Ala Gly Glu
      85

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&lt;210&gt; 1183

&lt;211&gt; 462

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1183

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gtcagacagc	gtcactgggg	ctcttgggtt	tccgaaattc	gccatcctct	ggtgaagaga	120
aggggtgtgg	tgggcacgtt	cgagacggct	gaggaggcgg	cacgagccta	cgaccaggcc	180
gccatcttga	tgagtggcgg	caatgcaaag	accaacttcc	cgacatctca	aaccacgaac	240
ggcgaccccg	ccgctgccaa	ttccttgtct	tcctcgaagc	acttgtcgga	gatcctccac	300
gcgaantcaa	ganatgcagc	aagacgccgt	cgccatccct	cacctgccta	aggctcgaca	360
ctgagaactc	ccacatcgga	gtctggcaga	agggtgccgg	ccagcgtcag	actcaactgg	420
gtatgaccgt	acagtcggaa	caaaaatccg	atccattggt	ag		462

&lt;210&gt; 1184

&lt;211&gt; 340

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1184

gactccccct	atccccctct	tttctccctc	tcaagaatca	agagattact	atggaaagcg	60
aacgctacga	tgagacgaca	gaggggcagc	gaatcaagag	aaggccgcac	cagcagcagc	120
agcagcagca	gcagcggcgg	cagaagcctt	acaggggtat	ccggatgagg	aagtggggca	180
agtgggtggc	cgagatcagg	gagcccaaca	agcgtccccg	catctgggtc	ggctcctatg	240
ccacccccgt	ggccgcgcgc	cgcgccctacg	acaccgccgt	cttctacctc	cgcgggccctc	300
ccgcccgcct	caacttcccc	gacctcatct	ggcgcgaggg			340

&lt;210&gt; 1185

&lt;211&gt; 190

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1185

cttgggggtg	acatggcgcg	acgtggcgga	ggaaggaggc	gaacggcggc	tccgaggcgt	60
ccgacgccgt	cttgccgcga	gtcatcatc	gccatcgta	caagggagtg	aggatgcgga	120
agtgggggaa	gtgggtggcg	gagatacggc	agcccaacag	ccgggaccgc	atctgggtcg	180
gctcctacgc						190

&lt;210&gt; 1186

&lt;211&gt; 473

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1186

aacaaaggtn	tgtgtatgga	accattctgg	atagcattgc	aaaggttact	ggaattgtga	60
agtttgatct	gcatgctgag	ccagaggaag	gaaaaaagaa	gattgaggtc	ggaggaaatg	120
ttgcaggtgt	gtttgacctt	ggaccaggta	gaattnggtt	ctgaagctgt	ttttgtccct	180
cgagagcctg	gcatcacttc	tgaagaagat	gatgggtacc	tgatattctt	tgtccatgat	240
gaaagcacag	ggaagtcggc	agtaaatgta	attgatgcga	aaaacatgtc	atctgatcct	300
gttgctgtcg	ttgaattacc	ccataggggt	ccttatggct	tccatgcctt	cttcgtgact	360
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tgcatgtgtt	gcgaggggag	gcatatctct	ggaaagctgc	tacagttgat	cta	473

&lt;210&gt; 1187

&lt;211&gt; 333

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1187

accagatcca	gatgcagagg	tcattgcact	atcgccaaag	acgctcatgg	cgacgaacag	60
gttcgtttgc	gagatatgca	acaaaggctt	ccagagggac	cagaacctgc	agctgcaccg	120
gagggggccac	aacctgccat	ggaagctccg	gcagaggagc	aaggagatcg	tcaagaagaa	180

ggtttatata	tgccctgaga	agacgtgcgt	gcaccacgac	ccttcaaggg	cacttggcga	240
cctcactggg	atcaagaagc	acttcagccg	gaagcatggc	gagaagaagt	ggaagtgtga	300
gaagtgcctg	aagaagtacg	cagtccagtc	aga			333

&lt;210&gt; 1188

&lt;211&gt; 420

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1188

taaaaacat	gcagtctctc	agccactgaa	catggcgctt	gaagctctca	actcgccac	60
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ctccaagcgc	ccccgcgcgc	accctcagga	ccagccctcc	gaggaggagt	acctggccct	180
ctgcctcatc	atgctcgccc	gccgcgcgcg	ccgacccggc	agcagcggca	ggctccacga	240
gtgctccatc	tgccacaagg	ccttccccac	cgccagggcc	ttgggcggcc	acaagcgggtg	300
ccactacgac	ggcggcagca	gtagcagcgc	cgcccgctgt	gcctcttcct	cagaagccgg	360
cggtccctagc	cacacgactg	tcagccaccg	cgagccgatac	gacttgaact	tgccggcctt	420

&lt;210&gt; 1189

&lt;211&gt; 365

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1189

tgacgcgcag	cgacgtgggg	aagctgaacc	ggctgggtgat	cccgaagcag	cacgcggaga	60
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aggacgtcgg	cggaaggtg	tggcggttcc	ggtattcgta	ctggaacagc	agccagagct	180
acgtgctcac	caagggttgg	agccggttcg	tgaaggagaa	gagcctgaag	gccggcgaca	240
ccgtntgctt	ccagcggctg	accgggcccg	acaagcagct	ntacatcgac	ttcaagccgc	300
ggggccagcc	gccggccggc	ccggccgcgc	cgccgcgcgc	gcccgtacag	atggtgaggg	360
tggttc						365

&lt;210&gt; 1190

&lt;211&gt; 434

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1190

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cctagctcga	gcacgggttc	gtggatgtgg	aaccctagtg	ccgcccagga	ggatgatgac	180
tcgtgggagg	tgagagcctt	cgccgaagac	actagcaaca	ttatgggcgc	aacctggccg	240
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ggccacatga	atgtccaccg	cagagaccgt	gctaagcttc	accaatcaca	attccggccg	360
ctggcgaaac	aaaattctcc	tttcgcttct	tgctcttccc	cgtcctcctc	gactctgcta	420
ttcccgaaac	aaga					434

&lt;210&gt; 1191

&lt;211&gt; 479

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1191

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accaaaaaaa	tggtgagggg	gaagactcag	atgaggaggga	tagagaacaa	gacgagcagg	120
caagtgcact	tctcgaagcg	tcggaacggg	ctgctcaaga	aggccttcga	gctctcggtt	180
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tctacctcaa	gcatgagcag	cataatagaa	cgatatcaaa	ggaaaaacaa	ggaccggggg	300
tgacgcgaga	aaactaccga	aatcgatttg	cagaatatga	agggaaactc	tctagacatg	360
gcaaagatga	tcgaacttct	caacgtttcc	aacagtcggc	tctcaggaga	actttcagat	420
acgtgttcag	ttgaggagct	acaatcaaca	cagaacctgt	tagagagaag	cttatccaa	479

<210> 1192  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1192  
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 tcttgagagc cctgaacaag cgcaagcgct ccaagcgccc ccaccaccct ccctccgaag 240  
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 accaccacgc 310

<210> 1193  
 <211> 466  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1193  
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 caggacccat catttgcttc atacgtttct tgtggcgctt cgtcttgaaa tgctcgtccc 420  
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<210> 1194  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1194  
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 ccacaaccac cgccaccgcc ttccaccacc aagaaaaaga ggaatctccc tggaatgccc 180  
 gatccagatg cagaggtgat agctctgtct cccacgaccc tattggccac caacaggttc 240  
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<210> 1195  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1195  
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 gctccgggag cccaacaaga agaccggggt atggctc 337

<210> 1196  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1196  
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cgacgagatg	atgatgaaga	aggggagcga	cgganggata	gcggaggtga	atcccacgcc	180
gaagaagggg	gtgacgtcca	aggttgtgga	ctacattgag	aagctgatcg	tgaagttcat	240
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attcgctccg	gtgggcccc	atcccaagtt	tgccccggtc	gccggatacc	actggtttga	420
tggagatggc	atggntcatg	ggatgcggat				450

&lt;210&gt; 1197

&lt;211&gt; 351

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1197

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tccaacccaa	cagctatcgc	actatcccac	tgcagacgcc	ctcccacgaa	ccctttctct	120
tctgatcccc	atcccactc	ctgcccgttc	gacttcccc	agccgtcctt	ctcgctcgccg	180
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&lt;210&gt; 1198

&lt;211&gt; 359

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1198

agaacacctc	agaatcaaca	ccactcccca	atttctctct	ctaagatccc	acacccaacc	60
gccaccctca	atctctctct	ttctctctct	tcttcagtgt	ctgccatggc	tttggaggcc	120
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&lt;210&gt; 1199

&lt;211&gt; 645

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1199

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&lt;210&gt; 1200

&lt;211&gt; 376

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1200

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atagacaaca	ttcttcctta	tataggcggg	agcaactacg	gngttgacag	caaaatttac	120
aaagccagca	gtagcacacg	gatgtcaaga	ttcacctcca	aaccgataaa	gtcgacatgg	180

ctctattaat	ccagccaaga	tatagagccc	cctccctctg	ctcgattctg	taattcccgt	240
gatactgctt	cagcatatcg	agcacagcac	gagtaaccga	tgcgtccact	ggtagctgat	300
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tctcangccc	atcaca					376

<210> 1201  
 <211> 461  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1201						
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gacgaaatga	acaggggttaa	aagctcgggt	tcacctttta	aaggtcagat	cgatcttaat	360
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<210> 1202  
 <211> 447  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1202						
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agttcatgta	cgactcctct	ctgcctcacc	aatacctcgc	cggcaacttc	gctcccgtcg	180
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<210> 1203  
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 <213> Eucalyptus grandis

<400> 1203						
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acatacccga	atcccagat	ggccgcgcgc	gcctttgacg	tggccgcgct	ggctctgaaa	420
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<210> 1204  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1204						
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gagaagaagg	aagttaaaga	aaggttcgcc	ttcaagacga	aatccgaggt	tgagatacta	180
gatgacggat	tcaagtggag	gaagtacggg	aagaagatgg	tgaagaacag	tcggaatccg	240
aggaactact	atcgggtgttc	ggtggaaggc	tgtcctgtga	agaagagagt	cgaacgggac	300

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<210> 1205  
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<400> 1205  
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 aagactctat caacctcgct caactccaac cggtgaaaac agagaacctg tttctcgatc 120  
 caggaccaga ctgccagat tcagatcatc ccacctggca agacctggag acaccaaadc 180  
 ttgagattaa agccgagccc atcaccttgg aatctccaga gtcggagttg gggtcgccgg 240  
 agaagaatca ggacgaggct ggctccgcgg ccaaggcaag ttacagaggg gttcggcgaa 300  
 gaccatgggg aaaatatgct gcggagatac gggacccgac acgtaaaggg agccgggtct 360  
 ggtaggggac ctacgacacg gacgtagatg ctgccaggc 400

<210> 1206  
 <211> 408  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1206  
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 ctggctccgag ctcgaccccg cctccgacct cctcagctc gacggccccg tggccaagg 180  
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<400> 1209



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&lt;210&gt; 1210

&lt;211&gt; 521

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1210

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&lt;210&gt; 1211

&lt;211&gt; 537

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1211

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&lt;210&gt; 1212

&lt;211&gt; 399

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1212

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&lt;210&gt; 1213

&lt;211&gt; 283

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1213

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&lt;210&gt; 1214

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1214

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&lt;210&gt; 1215

&lt;211&gt; 358

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1215

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&lt;210&gt; 1216

&lt;211&gt; 329

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1216

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&lt;210&gt; 1217

&lt;211&gt; 346

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1217

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&lt;210&gt; 1218

&lt;211&gt; 468

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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<211> 162

<212> DNA

<213> Eucalyptus grandis

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<210> 1220

<211> 354

<212> DNA

<213> Eucalyptus grandis

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<211> 310

<212> DNA

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<211> 315

<212> DNA

<213> Eucalyptus grandis

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 <212> DNA  
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 <213> Eucalyptus grandis

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 <213> Eucalyptus grandis

<400> 1231						
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&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1232

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&lt;210&gt; 1233

&lt;211&gt; 508

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1233

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&lt;210&gt; 1234

&lt;211&gt; 503

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1234

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&lt;210&gt; 1235

&lt;211&gt; 367

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1235

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&lt;211&gt; 360

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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 <212> DNA  
 <213> Eucalyptus grandis

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 <212> DNA  
 <213> Eucalyptus grandis

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 <212> DNA  
 <213> Eucalyptus grandis

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 tgcaaagagc ccactggctc ggaattgatg tcttacatgt ccactcctta tcagattttg 420  
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 <213> Eucalyptus grandis

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 cggcgaagag aaagtgtgct ggggagagag agagcgtgca gagaggtaga agagagagaa 240  
 gagagaggag agagaacgtg aaaggaggca gaagagagag agtgcagcga ggggagagag 300  
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 <212> DNA  
 <213> Eucalyptus grandis

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 gaagaagtgc aacagagtgc aacagctaca cagagatgca gctcaggcca gctcatggac 300  
 tcatcattcg accggactcc agatgtcgaa atggcaggcc actctgtggg attcaactac 360  
 ctgaac 366

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 <213> Eucalyptus grandis

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 ctccggcgac ctcgagaccg tcggccgcta cgacttcgcc ggccagctcg actctccgat 180  
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 <212> DNA  
 <213> Eucalyptus grandis

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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1244



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&lt;210&gt; 1245

&lt;211&gt; 383

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1245

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&lt;210&gt; 1246

&lt;211&gt; 380

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1246

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&lt;211&gt; 360

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1247

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&lt;210&gt; 1248

&lt;211&gt; 351

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1248

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<210> 1250  
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 <213> *Eucalyptus grandis*

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 <213> *Eucalyptus grandis*

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<210> 1252  
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 <212> DNA  
 <213> *Eucalyptus grandis*

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 <212> DNA  
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 <213> *Eucalyptus grandis*

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&lt;211&gt; 311

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1258

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&lt;210&gt; 1259

&lt;211&gt; 588

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1259

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&lt;210&gt; 1260

&lt;211&gt; 620

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1260

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&lt;210&gt; 1261

&lt;211&gt; 562

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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<212> DNA  
<213> Eucalyptus grandis

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<212> DNA  
<213> Eucalyptus grandis

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<212> DNA  
<213> Eucalyptus grandis

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<212> DNA  
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&lt;210&gt; 1266

&lt;211&gt; 360

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1266

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&lt;210&gt; 1267

&lt;211&gt; 375

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1267

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&lt;210&gt; 1268

&lt;211&gt; 567

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1268

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&lt;210&gt; 1269

&lt;211&gt; 567

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1269

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&lt;210&gt; 1270

&lt;211&gt; 325

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1270

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&lt;210&gt; 1271

&lt;211&gt; 365

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1271

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ctgct						365

&lt;210&gt; 1272

&lt;211&gt; 365

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1272

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&lt;210&gt; 1273

&lt;211&gt; 328

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1273

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&lt;210&gt; 1274

&lt;211&gt; 390

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1274

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&lt;210&gt; 1275

&lt;211&gt; 384

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1275

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&lt;210&gt; 1276

&lt;211&gt; 382

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1276

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&lt;210&gt; 1277

&lt;211&gt; 367

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1277

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&lt;210&gt; 1278

&lt;211&gt; 384

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1278

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&lt;210&gt; 1279

&lt;211&gt; 368

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1279

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&lt;210&gt; 1280

&lt;211&gt; 341

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1280

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&lt;210&gt; 1281

&lt;211&gt; 295

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1281

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&lt;210&gt; 1282

&lt;211&gt; 365

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1282

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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1287  
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<213> *Eucalyptus grandis*

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<212> DNA  
<213> *Eucalyptus grandis*

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<212> DNA  
<213> *Eucalyptus grandis*

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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1292  
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 <212> DNA  
 <213> Eucalyptus grandis

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 <213> Eucalyptus grandis

<400> 1295  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1297						
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<400> 1299						
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 <212> DNA  
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<400> 1300						
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&lt;210&gt; 1301

&lt;211&gt; 483

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1301

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&lt;210&gt; 1302

&lt;211&gt; 368

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1302

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&lt;210&gt; 1303

&lt;211&gt; 348

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1303

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&lt;210&gt; 1304

&lt;211&gt; 349

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1304

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<212> DNA

<213> Eucalyptus grandis

<400> 1305

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<210> 1306

<211> 513

<212> DNA

<213> Eucalyptus grandis

<400> 1306

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<211> 348

<212> DNA

<213> Eucalyptus grandis

<400> 1307

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<211> 345

<212> DNA

<213> Eucalyptus grandis

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<210> 1309

<211> 337

<212> DNA

<213> Eucalyptus grandis

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&lt;210&gt; 1310

&lt;211&gt; 383

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1310

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&lt;210&gt; 1311

&lt;211&gt; 455

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1311

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&lt;210&gt; 1312

&lt;211&gt; 472

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1312

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&lt;210&gt; 1313

&lt;211&gt; 384

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1313

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&lt;210&gt; 1314

&lt;211&gt; 428

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1314

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&lt;210&gt; 1315

&lt;211&gt; 140

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1315

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&lt;210&gt; 1316

&lt;211&gt; 502

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1316

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&lt;210&gt; 1317

&lt;211&gt; 365

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1317

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gttca						365

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 <212> DNA  
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<210> 1319  
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 <212> DNA  
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<400> 1319  
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 <212> DNA  
 <213> Eucalyptus grandis

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 tggcaatcga tgtgaagata atgggttggg atgcagtggg tcgagtagag agcggccgga 240  
 aggatcatcc tgcagcaagg ttaatgggtg ctcttcaaga attgaacttg gagttgcaac 300  
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 tcag 364

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 <212> DNA  
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<400> 1322  
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 gaagaagttg ccatagctcg attcctccac cagagataaa gagctccatc cttctcttcg 240  
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 ctcaatggga actggttgaaa cccggccatc ctaaaccttg acctccattt ccccaaaagt 360  
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<210> 1323

<211> 382

<212> DNA

<213> Eucalyptus grandis

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 caagcgaggc gtccgataag tgccggaagg agaggaggaa gactgtgaat ggagacgaca 300  
 tctgctgggc gatgcaagcc ctaggcttcg acgactatgc gagtgccttg aggaggtacc 360  
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<210> 1324

<211> 377

<212> DNA

<213> Eucalyptus grandis

<400> 1324  
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 cttcaactac atcacccgat tcggcgctcg ctgctggagc tctgtaccga agctcgccgg 240  
 taagacatga tgacagacgg gaaaggagaa gctcattcac agttggtttc tggggaataa 300  
 gtttctgttc ttggagagaa tttgattcga aaaccatgtg aatgatcgaa ttctctcgtc 360  
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<210> 1325

<211> 305

<212> DNA

<213> Eucalyptus grandis

<400> 1325  
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<210> 1326

<211> 288

<212> DNA

<213> Eucalyptus grandis

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 cttcagggtc ctggggctcg tgctttggat gttaagctcg tagagactga atcgacgatg 180  
 gatggttcg aaggaaaatc gaatgctccg gctccgttcc tgggtcaagac ctatgagatg 240  
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<210> 1327  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1327  
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<210> 1328  
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 <212> DNA  
 <213> Eucalyptus grandis

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 cagttccgta tcctgaggca gaaggggacc gaatatccag gcacgggtga atacacaagt 180  
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 ctaaatttaa ctccgctgc 259

<210> 1329  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1329  
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 ctttgcaagc tagaaatgct gagtataatc ccaagcgttt tgctgctgta attatgagaa 240  
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<210> 1330  
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 <212> DNA  
 <213> Eucalyptus grandis

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<210> 1331  
 <211> 337  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1331  
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ccgcttttggg tgtcggggcgg ggaccgcctc gccgactgcg gctgcgagag ggccaagcag 300  
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<210> 1332  
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<212> DNA  
<213> Eucalyptus grandis

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gataaagaat gtatcccggg ggatcaagat cgcaagatgg caaaacctac ggggaagtagg 300  
tccactgggg tggcaatcga tgtga 325

<210> 1333  
<211> 362  
<212> DNA  
<213> Eucalyptus grandis

<400> 1333  
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<211> 216  
<212> DNA  
<213> Eucalyptus grandis

<400> 1334  
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<210> 1335  
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<212> DNA  
<213> Eucalyptus grandis

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<210> 1336  
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<212> DNA  
<213> Eucalyptus grandis

<400> 1336  
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&lt;210&gt; 1337

&lt;211&gt; 322

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1337

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&lt;210&gt; 1338

&lt;211&gt; 536

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1338

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&lt;210&gt; 1339

&lt;211&gt; 438

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1339

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&lt;210&gt; 1340

&lt;211&gt; 533

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1340

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ctg						363

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 <213> Eucalyptus grandis

<400> 1342						
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&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1345

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&lt;211&gt; 350

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1346

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&lt;211&gt; 197

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1347

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&lt;210&gt; 1348

&lt;211&gt; 315

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1348

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&lt;210&gt; 1349

&lt;211&gt; 329

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1349

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&lt;210&gt; 1350

&lt;211&gt; 313



&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1350

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&lt;210&gt; 1351

&lt;211&gt; 305

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1351

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&lt;210&gt; 1352

&lt;211&gt; 517

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1352

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&lt;210&gt; 1353

&lt;211&gt; 472

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1353

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&lt;210&gt; 1354

&lt;211&gt; 472

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1354

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&lt;210&gt; 1355

&lt;211&gt; 503

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1355

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&lt;210&gt; 1356

&lt;211&gt; 360

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1356

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&lt;210&gt; 1357

&lt;211&gt; 377

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1357

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&lt;211&gt; 360

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1358

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&lt;210&gt; 1359

&lt;211&gt; 347

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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&lt;211&gt; 326

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1360

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&lt;210&gt; 1361

&lt;211&gt; 526

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1361

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&lt;211&gt; 307

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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&lt;210&gt; 1363

&lt;211&gt; 353

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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&lt;213&gt; Eucalyptus grandis

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&lt;213&gt; Eucalyptus grandis

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&lt;211&gt; 345

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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 <212> DNA  
 <213> *Eucalyptus grandis*

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 <212> DNA  
 <213> Eucalyptus grandis

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 <213> Eucalyptus grandis

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 <212> DNA  
 <213> Eucalyptus grandis

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<210> 1382  
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&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1382

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&lt;210&gt; 1383

&lt;211&gt; 408

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1383

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&lt;210&gt; 1384

&lt;211&gt; 315

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1384

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&lt;210&gt; 1385

&lt;211&gt; 375

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1385

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&lt;210&gt; 1386

&lt;211&gt; 332

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1386

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&lt;210&gt; 1387

&lt;211&gt; 320

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1387

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&lt;210&gt; 1388

&lt;211&gt; 409

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1388

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&lt;210&gt; 1389

&lt;211&gt; 313

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1389

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&lt;210&gt; 1390

&lt;211&gt; 329

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1390

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&lt;210&gt; 1391

&lt;211&gt; 156

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1391

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&lt;210&gt; 1392

&lt;211&gt; 555

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1392

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&lt;210&gt; 1393

&lt;211&gt; 525

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1393

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&lt;210&gt; 1394

&lt;211&gt; 443

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1394

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&lt;210&gt; 1395

&lt;211&gt; 409

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1395

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&lt;210&gt; 1396

&lt;211&gt; 462

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1396

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&lt;210&gt; 1397

&lt;211&gt; 407

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1397

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&lt;210&gt; 1398

&lt;211&gt; 456

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1398

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&lt;210&gt; 1399

&lt;211&gt; 474

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1399

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&lt;210&gt; 1400

&lt;211&gt; 443

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1400

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&lt;210&gt; 1401

&lt;211&gt; 481

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1401

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&lt;210&gt; 1402

&lt;211&gt; 384

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1402

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&lt;210&gt; 1403

&lt;211&gt; 380

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1403

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 <213> Eucalyptus grandis

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 <213> Eucalyptus grandis

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 gatattttcaa tttcgattct ggcccaataa taacagtaga atgtatgttc tgggaaggagt 240  
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 <212> DNA  
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 <212> DNA  
 <213> Eucalyptus grandis

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<212> DNA  
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<210> 1416  
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<212> DNA  
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<400> 1416  
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&lt;210&gt; 1417

&lt;211&gt; 372

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1417

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&lt;210&gt; 1418

&lt;211&gt; 354

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1418

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&lt;210&gt; 1419

&lt;211&gt; 540

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1419

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&lt;210&gt; 1420

&lt;211&gt; 349

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1420

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349

<210> 1421

<211> 378

<212> DNA

<213> Eucalyptus grandis

<400> 1421

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<210> 1422

<211> 358

<212> DNA

<213> Eucalyptus grandis

<400> 1422

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<210> 1423

<211> 373

<212> DNA

<213> Eucalyptus grandis

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<210> 1424

<211> 425

<212> DNA

<213> Eucalyptus grandis

<400> 1424

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<210> 1425

<211> 434

<212> DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1425

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&lt;210&gt; 1426

&lt;211&gt; 414

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1426

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&lt;210&gt; 1427

&lt;211&gt; 332

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1427

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&lt;210&gt; 1428

&lt;211&gt; 318

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1428

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&lt;210&gt; 1429

&lt;211&gt; 349

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1429

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 <212> DNA  
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cgccgtcagc	cccaggcccc	agggcggcgc	caaggagatc	cgcttccgcg	gcgtcaggaa	180
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1431						
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tcagcagggc	attttcattt	caggtagtgg	agaacaatcc	cactcaatga	gcggaaatgg	300
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1432						
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1433						
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 <212> DNA  
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tcgtcaatca	tgtcaaaacc	ttcttcgttg				210

&lt;210&gt; 1435

&lt;211&gt; 557

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1435

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&lt;210&gt; 1436

&lt;211&gt; 438

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1436

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gctcggcggg	cacaagcggg	gccactacga	ggcccccgcc	cccatccccg	cctccttctc	360
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&lt;210&gt; 1437

&lt;211&gt; 327

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1437

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&lt;210&gt; 1438

&lt;211&gt; 360

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1438

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&lt;210&gt; 1439

&lt;211&gt; 269

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1439

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&lt;210&gt; 1440

&lt;211&gt; 351

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1440

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&lt;210&gt; 1441

&lt;211&gt; 476

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1441

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&lt;210&gt; 1442

&lt;211&gt; 315

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1442

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&lt;210&gt; 1443

&lt;211&gt; 338

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1443

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&lt;210&gt; 1444

&lt;211&gt; 409

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1444

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&lt;210&gt; 1445

&lt;211&gt; 304

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1445

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&lt;210&gt; 1446

&lt;211&gt; 332

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1446

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&lt;210&gt; 1447

&lt;211&gt; 349

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1447

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 <212> DNA  
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<400> 1450  
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 <212> DNA  
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 <213> Eucalyptus grandis

<400> 1452

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&lt;211&gt; 378

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1453

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ctcagccctg	gcgggagtaa	ttttcacgca	tttcccatgg	aaccacttct	cgcacatgtc	360
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&lt;210&gt; 1454

&lt;211&gt; 339

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1454

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&lt;210&gt; 1455

&lt;211&gt; 372

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1455

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cacagcatgc	atccttgggg	tctggccact	gcatctcatg	ccattgcaac	tggaaactctc	120
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tcaatcattt	gg					372

&lt;210&gt; 1456

&lt;211&gt; 436

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1456

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ggctaccaat	gataatcttg	accttggtctg	tgcagtcatt	gaacgggctg	cagctgataa	300
ggcaattcaa	accatcgatg	gtgaaatc	tcaacaactt	aacctaaaga	aacataggga	360



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cccagaggct cttcgc 436

<210> 1457  
<211> 352  
<212> DNA  
<213> Eucalyptus grandis

<400> 1457  
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gccgacgccc accccttcga gtccaccggc ttcacaccg ccttctccac ctggtccctc 240  
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<212> DNA  
<213> Eucalyptus grandis

<400> 1458  
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caccacacgc cagacgagag tgttgacatc accaatccaa gggatgggct actaaggatg 180  
gtgaaatcgc tttctccgaa agtgatcaca ttgatcgagc aggagtcgaa cacgaacact 240  
acaccgttcc tgacaagggt tgtggagacc ctgactact acttggcaat gtttgagtcc 300  
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gcaa 364

<210> 1459  
<211> 224  
<212> DNA  
<213> Eucalyptus grandis

<400> 1459  
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tcgacgagca acagcaggaa acagaagtaa atgatgcctt gcagcagctg ccacctgatg 180  
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<210> 1460  
<211> 363  
<212> DNA  
<213> Eucalyptus grandis

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gggaatccgc caggcgctcc cggatgagga ggcagaagca gctgggggat ttggtcggag 180  
aagtggggca actgcagcag gctaacgctc agctcgcggt gagtatcaat gctgctgcgc 240  
agaagtatgc cgaggtcgag ttggcaaaca atgtcctcag ggcccaggcc atggagctta 300  
ccgagaggct ccggtccctg aactcggtag tcgagatcgt gaggtggcca gtgggctggt 360  
gat 363

<210> 1461  
<211> 351  
<212> DNA  
<213> Eucalyptus grandis

<400> 1461

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cggcat	ggag	gttgaa	acga	ctggag	ttgc	agttgg	agtc	ggaga	aggcg	tgcagg	agga	180
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ctttgg	ataa	gattg	aaaca	gaata	acagag	agcag	ctggc	aggat	tgagg	aaag	atgcag	300
aatcca	agga	gcaga	agctg	gctga	acagt	ggacgg	cga	gcatgt	cagc	t		351

&lt;210&gt; 1462

&lt;211&gt; 209

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1462

gttcaat	cag	ctcgac	ccga	ggatca	acag	gaagcc	cttc	agcgag	gaag	aggaag	agag	60
gctctt	gact	gcacac	aagc	tgtgtg	ggcaa	taa	atggg	cc	atgat	cgtc	ggctct	120
cggccg	gacg	gacaac	gccg	taaaga	acca	ctggc	acgtg	atcgt	cgcg	ggaag	cagag	180
agagc	agtcc	aacaac	gccc	gcggcc	gga							209

&lt;210&gt; 1463

&lt;211&gt; 423

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1463

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cagagg	acgc	ctctac	gagt	actcca	aaaa	cagcata	aagg	tcaact	atatag	agaggt	tacaa	360
aaagg	cta	at	agatt	caaac	acaag	cactgt	caca	gagat	caatg	cccagt	tatta	420
tca												423

&lt;210&gt; 1464

&lt;211&gt; 379

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1464

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tctcag	ctgc	aaaaga	agga	aaaat	ctcta	caggag	caga	ataac	gtgct	ctctaaa	aaag	120
atcaa	agaaa	atgaga	aggt	aatgag	agag	agtgg	acaat	gggag	cagca	aacccc	agca	180
ccgacc	acat	cctcct	tcat	gctaca	accc	actttg	ccctc	ttcctt	ccct	caccatt	ggc	240
aacac	gttcc	agacac	cgc	tgtact	ttgga	ggagc	agaac	aagagg	gagag	atctca	agcc	300
cgacc	agcca	acacg	ctcat	gccgc	cttgg	atgata	cgcc	gttcaa	aatga	atagag	agat	360
agagac	caac	aacatt	ctc									379

&lt;210&gt; 1465

&lt;211&gt; 334

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1465

catcac	acag	gttgatt	tga	gaact	gaaat	caagat	cgtc	gtcgt	cgtcg	tcgtt	ctcgt	60
cgg	tgtgct	cgccgc	att	tgact	cggcg	taacga	acga	agccg	gttgc	gatct	aggg	120
tg	ttggggg	cgcgga	ggaa	gctcg	agcct	cggtc	gtttg	ttttc	ttttt	ctttt	tgcc	180
gat	catgga	ggcgt	cggcg	tcgat	cacct	ggccg	atgag	cggc	agaag	cgcggt	tcga	240
cgt	ggagg	atga	aggtcg	tctggg	cgg	ctctag	ccac	gccgt	cagag	tctccg	atcg	300
catgg	ccgcg	tcgtc	gccag	cgatc	cgcc	tttc						334

&lt;210&gt; 1466

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 <213> Eucalyptus grandis

<400> 1466  
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 gaaggaaatca attactccct cgttactggc ccaggataac agatcaagag ctacaacaga 300  
 tccctggaga ctcaaactct gtaatcactc cgctgtttga gaaaatgttg agtgctagtg 360  
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<210> 1467  
 <211> 456  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1467  
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 tgagtcaatt gatgtagcgt gccgacggga tgacaagcaa aggatcagtg cggagcagca 360  
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<210> 1468  
 <211> 417  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1468  
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 tcaccatgta cggccatctt ttcaatctgt ggtttatgag aatcagccac gcttggccag 360  
 gcatgttggt gatgatatga ggtatgctgg gactaatccg ctgtatggtt catcttg 417

<210> 1469  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1469  
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<210> 1470  
 <211> 408  
 <212> DNA  
 <213> Eucalyptus grandis

&lt;400&gt; 1470

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&lt;210&gt; 1471

&lt;211&gt; 530

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1471

gcagaatctg	tagtatatat	gacgatgaaa	gggaaatcta	tactgcccct	tactgtaact	60
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aagagcaaat	gccagatgag	tattctggca	agaccaggt	tattctctgc	aatgactgcg	420
agaagagagg	aagcacatct	tttcattggg	tttatcacia	gtgccgtcat	tgcggttcat	480
ataacacgag	gctgctttga	ttccaacct	agacgcata	atataactct		530

&lt;210&gt; 1472

&lt;211&gt; 381

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1472

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accagcaaga	gtccaaagaa	g				381

&lt;210&gt; 1473

&lt;211&gt; 567

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1473

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&lt;210&gt; 1474

&lt;211&gt; 423

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

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 gca 423

<210> 1475  
 <211> 402  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 1475  
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 agccgtacag gggatatccg atgaggaagt ggggtaagtg ggtggctgag atcagggagc 180  
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 tcactcttga cgagggccag gactcgctgg gtgaggtctc agccgcctcc atccgcaggc 360  
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<210> 1476  
 <211> 269  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 1476  
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 tgcgacgcca aggtctccat catcatgatc tccagcaccg gcaagctcca cgagtacatc 180  
 aagctcctcc acctcaacga agaagatgta cgatcagtat cagcaggcgc tcgaggttga 240  
 tctctggagc tctcactatg agaagatgc 269

<210> 1477  
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 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 1477  
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 tggagctcca tctgtgaagt gtgcgatctg tcaatttatt actaacgttg gtgcggggcaa 180  
 tccaaggggt tctgttccac cacaagaat cgatggacca ccgtcaggga caacaccgtc 240  
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<210> 1478  
 <211> 408  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 1478  
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tgatgcctat gccttctgcg atgagtgga gcttgcacta aacatgtc 408

<210> 1479  
<211> 317  
<212> DNA  
<213> Eucalyptus grandis

<400> 1479  
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cacgaactat tggcaatcga tctcatggct tcctcgagcg gaacgtcttc cgggtcaacc 180  
ttgatccaga actcgggatc agaggagagt ctgcaggcct tgatggatca gaggaagagg 240  
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ctggacgatc tgatgct 317

<210> 1480  
<211> 411  
<212> DNA  
<213> Eucalyptus grandis

<400> 1480  
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<212> DNA

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&lt;400&gt; 1483

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&lt;210&gt; 1484

&lt;211&gt; 335

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1484

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&lt;210&gt; 1485

&lt;211&gt; 371

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1485

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&lt;210&gt; 1486

&lt;211&gt; 373

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1486

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&lt;210&gt; 1487

&lt;211&gt; 319

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1487

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&lt;210&gt; 1488

&lt;211&gt; 384

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1488

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&lt;210&gt; 1489

&lt;211&gt; 411

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1489

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&lt;210&gt; 1490

&lt;211&gt; 396

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1490

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&lt;210&gt; 1491

&lt;211&gt; 188

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1491

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atccggca						188

&lt;210&gt; 1492

&lt;211&gt; 461

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis



&lt;400&gt; 1492

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&lt;210&gt; 1493

&lt;211&gt; 445

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1493

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&lt;210&gt; 1494

&lt;211&gt; 419

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1494

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&lt;210&gt; 1495

&lt;211&gt; 388

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1495

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&lt;210&gt; 1496

&lt;211&gt; 417

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1496

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&lt;210&gt; 1497

&lt;211&gt; 404

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1497

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&lt;210&gt; 1498

&lt;211&gt; 340

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1498

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&lt;210&gt; 1499

&lt;211&gt; 311

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1499

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&lt;210&gt; 1500

&lt;211&gt; 324

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1500

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&lt;211&gt; 512

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1506

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&lt;210&gt; 1507

&lt;211&gt; 342

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1507

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&lt;210&gt; 1508

&lt;211&gt; 413

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1508

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&lt;210&gt; 1509

&lt;211&gt; 296

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1509

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 caagaaaatg tgccgagggc tattttccgt ctatttctca gcttgaagga ttgccactca 240  
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 <212> DNA  
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 <213> Eucalyptus grandis

<400> 1517  
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<210> 1518  
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 <213> Eucalyptus grandis

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&lt;210&gt; 1520

&lt;211&gt; 439

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1520

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&lt;210&gt; 1521

&lt;211&gt; 448

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1521

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&lt;210&gt; 1522

&lt;211&gt; 439

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1522

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&lt;210&gt; 1523

&lt;211&gt; 361

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1523

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&lt;210&gt; 1524

&lt;211&gt; 422

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1524

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&lt;210&gt; 1525

&lt;211&gt; 443

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1525

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&lt;210&gt; 1526

&lt;211&gt; 379

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1526

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&lt;210&gt; 1527

&lt;211&gt; 419

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1527

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<212> DNA  
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<213> Eucalyptus grandis

<400> 1535  
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gcatttcaat ggaagtatgc tcaatgatac taactcatct ggtgaaagtc acacacgtaa 180  
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aaaatgtgcc gaggcctatt ttccgtctat ttctcagctt gaaggattgc cactcaaagt 420  
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gaatgtatgt tctggaa 497

<210> 1536  
<211> 454  
<212> DNA  
<213> Eucalyptus grandis

<400> 1536

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gagggtcaaag	acagcgccgt	cgcggggcgg	ccgcggtcaa	gggttcttcg	aattataacg	420
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&lt;210&gt; 1537

&lt;211&gt; 266

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1537

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caggaggctg	ccccttcg	gccagaggag	gcaactttga	atcagcaaac	tccaccgtac	180
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aaaacccgaa	tctggctcgg	ctcctt				266

&lt;210&gt; 1538

&lt;211&gt; 426

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1538

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agctttggct	gtaaattttc	ctttgcagct	ccatcatatg	cctgatgaga	gtgtgaatac	420
aagtaa						426

&lt;210&gt; 1539

&lt;211&gt; 447

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1539

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gccggcaaaag	aaatacaaaa	aaacccatag	caagaaagcc	caagacgggt	ctcagccacg	120
aagggtgcagc	cattgtcttg	tacagaagac	tcctcagtg	agagccggac	ccttgggacc	180
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ccgcccggca	ataagcccca	ctttttttga	gcgagggttca	ctccaatagc	cacagaaaaa	300
tcctcgaaat	gagacgcaa	aaagaagaag	aacaacagag	gccagagcta	acgtcccaga	360
cgtgttcaag	cggcgccaac	gagtcatttt	cagacaattc	tttaccgtct	gaagagtccc	420
ttctagttta	accacaggc	gtgaaat				447

&lt;210&gt; 1540

&lt;211&gt; 382

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1540

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ttccgaaaat	ggcgcgccat	cctcatcata	tggtttggaa	aaggntatg	acattaatag	300
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ggagaatggc	ggatctttca	ac				382

<210> 1541  
 <211> 368  
 <212> DNA  
 <213> Pinus radiata

<400> 1541						
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tccagtctgt	ttgacatgac	gccggtgagt	tttttcttcc	tgtcttaaat	tcttggtgtg	180
gtgggcatgg	aagggattca	ggaggcgtct	tgggcaaaga	tcccaaaaat	tggatttgca	240
atcaatcatg	attcataatt	gttctgaaaa	ttatgctaag	aactaatctc	atctttcaaa	300
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tttcattt						368

<210> 1542  
 <211> 370  
 <212> DNA  
 <213> Pinus radiata

<400> 1542						
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aagcccacga						370

<210> 1543  
 <211> 404  
 <212> DNA  
 <213> Pinus radiata

<400> 1543						
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cgcaaccaga	tccgacacta	ctactgtcaa	caacggatcc	gctaattggc	caatagggaag	180
tgctccccc	agaatttaact	cgatacaaaa	taataatcca	ggagctgtca	ggcctggctg	240
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caatggatatg	cagggctcagc	ttgtgtgcag	tggatgtaga	actcttcttg	tttatccgca	360
aggtgcacca	aatgtttgct	gtgcagtatg	caacacagtc	actc		404

<210> 1544  
 <211> 339  
 <212> DNA  
 <213> Pinus radiata

<400> 1544						
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ccaagaaagc	agggctgcga	agatgtggaa	agagctgcag	attgcgttgg	ctaaactatc	240
ttcggccatg	tatcaagcgg	ggaaatatta	caacagatga	agaagaactt	attatcagaa	300
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<210> 1545  
 <211> 395

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1545

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atatgattct	ctccgaatac	gttcgaattc	atggcgatgg	tggatggaga	aatcttccgg	180
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atgcgcttct	tggcaatcgg	tggtcactga	tagcaggacg	actgcctggg	cgaacagaca	360
acgaaatcaa	gaactactgg	aacactcatc	tgagc			395

&lt;210&gt; 1546

&lt;211&gt; 390

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1546

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atgtttacag	aggtatcaga	cagcgtccat	ggggaaaatg	ggctgcggag	attcgagatc	180
ccagtaaggg	ggttaggggt	tggcttgaa	cgttcaacac	ggcagaggag	gccgccaaag	240
cctatgatgc	agcggctaaa	aggatccgag	gtaagaaagc	taagctaaat	tttgctgata	300
actcgtgttc	tgttaaaaat	gacactagca	agaaattgtc	aggaaaagaa	aggaaagtgt	360
tgctcaaaac	accctgcttt	tggtgttaga				390

&lt;210&gt; 1547

&lt;211&gt; 447

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1547

agggtccccg	cgaaatgact	gaagaggagc	gggagacgaa	gaaggccgcc	agtgtggccg	60
ccacggctgc	cgaccaggag	ctcaggaaga	aagtgtctgc	ggatctgcac	gcgctgatta	120
atcccaacgc	gactggagag	gcggatccgg	cggagtctcc	aggggatgat	gctactgtag	180
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cagaaaagct	tcagagctac	aactgtgagc	gggctcgtca	ggctcagcaa	ttcggcattc	360
aaaccatggg	atgtattcca	acacctaatt	gagttgttga	ggtgggttcc	acggatttaa	420
atccgcagaa	ctgggatttg	atacaga				447

&lt;210&gt; 1548

&lt;211&gt; 357

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1548

cagaaatctt	gtgatccttg	tgattataat	caaaggctcag	ccttgcaagc	aaccgtgaag	60
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cggaaccttt	cgaataatgg	attcgctact	tcttccatgg	aaatgttagc	ggttatgccg	180
gatcagatta	ctgtcgaagc	accaccggat	tcgtcgacgt	tgctcgcggc	accacgcaat	240
ggccgattgg	caggggagcg	gcgggcaagg	ccgcacccga	gtcaagtgtc	caaatgcctt	300
cgctgcgatt	cgctaaacac	aaagttctgc	tactacaaca	actacaatct	ctcgcag	357

&lt;210&gt; 1549

&lt;211&gt; 395

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1549

gagcactcaa	aatgggggaag	acgaagatgg	agattaaacg	cattcaaaac	cctagccgcc	60
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gccaggttac	tttctcgaaa	cgcaagaacg	gattgctaaa	aaaggcattc	gagctttctg	120
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<210> 1550  
 <211> 634  
 <212> DNA  
 <213> Pinus radiata

<400> 1550						
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cctaattgata	aggcctgcaa	taattgtcgc	cagactggcc	acttggtctg	agattgtatg	600
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<210> 1551  
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 <212> DNA  
 <213> Pinus radiata

<400> 1551						
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<210> 1552  
 <211> 562  
 <212> DNA  
 <213> Pinus radiata

<400> 1552						
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agaacatgta	ccacctcctc	gtccaaaacg	caaagcatct	catccatacc	cacagaaggc	480
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<210> 1553

<211> 392  
 <212> DNA  
 <213> Pinus radiata

<400> 1553  
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 atgcttctat accttgagac taatgcacga gaaagagcaa catctctctc aaccgttggg 180  
 cgtggcctct gacggttaata acgaagaaat tcacgagAAC caagcatctt gcatgttgtt 240  
 ccattttcag actttctttg gattaccagt tcagccctc caaagccaag ttcaatattg 300  
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 <212> DNA  
 <213> Pinus radiata

<400> 1554  
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<210> 1555  
 <211> 392  
 <212> DNA  
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<400> 1555  
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 ccgactcatc gcctacattc gagccacggt cgaaggcggtc tggcattccc ttcccagggtc 180  
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<210> 1556  
 <211> 364  
 <212> DNA  
 <213> Pinus radiata

<400> 1556  
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 tgtagattac gttgggttaa ctatcttctg cccgacatta aacgcggaga catttcccca 300  
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<210> 1557  
 <211> 355  
 <212> DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1557

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gaaacagatg	gaaacatggg	ggcttcgctg	gtccaaagcg	tgaagggttg	tgaatcacia	300
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&lt;210&gt; 1558

&lt;211&gt; 478

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1558

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tttctgttag	aaattcccat	catccctctg	tgtcttcctc	cttttgaatc	cagagactgt	120
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ggtgggtaaa	aagcccacaa	agcttgtgct	ctgcctcgc	tgcgagagca	tggtatacaa	420
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&lt;210&gt; 1559

&lt;211&gt; 389

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1559

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aaatcaagaa	tttctggaga	actcgtatg				389

&lt;210&gt; 1560

&lt;211&gt; 354

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1560

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ctcttaccct	agaggataca	ggatctgtgc	tggttgcaat	catgagatag	gctatgggcg	180
gtttttaagt	tgtatgggga	ccttatggca	tccagattgt	ttttgttggt	ttgcatgtag	240
tctaccata	cgtgaacacg	agttttccat	gtcaggggaat	gatccatacc	acaaatcctg	300
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&lt;210&gt; 1561

&lt;211&gt; 248

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1561

gccaggtgag	gcattggcag	tcaattttgc	attccagctg	catcacatgc	ctgatgagag	60
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agttgtaaca	gttgtggaaa	gggaaatgaa	cactaatact	gtccttttcc	tccctcggtt	180



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ggaaaacc 248

<210> 1562  
<211> 346  
<212> DNA  
<213> Pinus radiata

<400> 1562  
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gctgaggagg atacaatttt gagtgaacat atcaaaactc atggagttgg tcgatggaca 180  
tctcttccca agaaagcagg tctaaaacga tctgggaaga gttgcagatt acgttggttt 240  
aactatcttc gttcagatat caagcatgga aacatttctc cggaagaaga ggaactcctc 300  
atcagattac atcgtctcct tggcaatcgt tggtcgttga tagcag 346

<210> 1563  
<211> 354  
<212> DNA  
<213> Pinus radiata

<400> 1563  
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attgagagcg atgatgatat caggagggtt cctgaaatgg gaggaatgca agcagggtcca 180  
tctacatgtg tgcctatgag gttagacaat ccccaaccta gcacaggcgt tgttgccac 240  
aggaagagag ggagagcccc tgcagacaag gaacacaagc gtctcaaaag attgcttagg 300  
aacagagtat ctgccccaca ggcaagagaa agaaagaaag cataacttaa tgat 354

<210> 1564  
<211> 324  
<212> DNA  
<213> Pinus radiata

<400> 1564  
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gggagtgcc ccaaggctcgc attttggtat gtaatagggg tggaagattt attgacgata 180  
ggcgtggaag atttaattgac ataactctgta ggacatgcaa cgagccaggg cataccagta 240  
gggagtgcac tgggaattctc atctgccaca acttgtgggtg gccgtggaca tgttgcatat 300  
gaatgcccc tctggctcgtg tgat 324

<210> 1565  
<211> 421  
<212> DNA  
<213> Pinus radiata

<400> 1565  
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aactcgaggt ggctgttagt gggaaatgcc atttttatac atgctccaa ggccatcggg 120  
agtggagaag agatcactat tccttatttt gatgttctgg ctcccttgtt acggcgccaa 180  
gctgactgta agaactggg tttcaagtgc aagtgtgaaga gatgcattct ggagcactca 240  
ttcaggaaat tcctagaacc tataattgcc cttaaagtttg agcaattgga tgaccaagca 300  
aaagaattgc ttgctggatt ggatcatcgg gaaagtgcag aaatgagtca ccgggaaat 360  
gcagaatttg caatgtttgt tccagaggca gaggagatca tccggagttc ccatgtgttg 420  
a 421

<210> 1566  
<211> 390  
<212> DNA  
<213> Pinus radiata

<400> 1566  
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 aagctcaacg cccccaaatt gtgattcgat gtttccctcc cactacacag cgttggcatt 120  
 gcgtcgccaa atgtggagaa accccagaga gtccggacag agccattccc agcctccaga 180  
 gaaagataga ggaaaaactt tcggccaatt taaggggaatc cgaatgcaaa aatggggaaa 240  
 gtgggtgtcc gaaattcgga tgccgagatc gaaggagagg atctggctag gatcctataa 300  
 aactgtcgag caagccgccc gtgcttacga tgccgcactc tattgcctca gaggaccaaa 360  
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<210> 1567

<211> 353

<212> DNA

<213> Pinus radiata

<400> 1567  
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 tgaagcatcc actgagccag tggaggaaga actagtgtat gaggccaaaa atggagattc 180  
 agggaaatta gaagatgtgg gtagtccagt agaggctgga gaaagtggta gcactagcaa 240  
 ttgcctggga tcatctgctc aagaaaatcg gaaatatgaa tgccaataact gttgcagaga 300  
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<210> 1568

<211> 436

<212> DNA

<213> Pinus radiata

<400> 1568  
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 gaacgggacc agcaggcagg ttactttttg taagcgcagg aacggtctgc tgaagaaagc 180  
 ttacgagctc tcggtgcttt gtgatgccga agtggcactt attgttttct ctccaaggagg 240  
 gaagcgctat gagttcgcta atcccagcat gcagaaaaatg ttggcacggt acgaaaaattt 300  
 ttcagaagga aataaagcaa cgagtacagc aaaagagcaa gatgtccagg gtttaaaacg 360  
 acaaattgag aatatggaag aaagggttga aattcttgaa tccatgcata gaaagatggt 420  
 gggggatagc tggcat 436

<210> 1569

<211> 349

<212> DNA

<213> Pinus radiata

<400> 1569  
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 cttctcgaca tgggttaagcc ctgcacaaaa cagaatatcc atgtcaatgg caagccggaa 180  
 agccgctcac tgatgtcgcg gcaattcaag ggaatccggc taaggaaatg gggaaaaatgg 240  
 gtgtccgaaa ttcgaaatgcc caattgcagg gccaaaaattt ggctgggctc ctacgaatcc 300  
 ccagagaaaag ctgcccgcgc ctatgacttt gcagcgtatt gtctgagag 349

<210> 1570

<211> 580

<212> DNA

<213> Pinus radiata

<400> 1570  
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 ggctgagcgg caaaggcgtg agaaattgaa ccagaaattt tatgagcttc gtgccgtggg 120  
 tctaattgta tcgaaaatgg acaaagcttc tctgctcggc gatgctgctg cttatatcaa 180  
 agatctcttt tccaaacagc aggatttggga gtccgagagg gttgatatgc aggttcaaat 240

tgacactata	aagaaggaat	tattgatgaa	ttctttgaag	ttggcagcta	aagaagcaaa	300
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agaagttcgc	attgttggcc	gagaggcgat	aataagaatt	cagtgtacta	aacataatca	420
tcctgtttgcg	agactgatga	tagcaactgca	agaacttgat	ttggaagttc	tccatgcaag	480
tatttctact	gtgaaggatt	ccttaattat	ccagacagtc	attgttaaaa	tgaccagagg	540
ttgttacacg	gaagaccaac	ttcacgcctt	gctttgtaag			580

<210> 1571  
 <211> 469  
 <212> DNA  
 <213> Pinus radiata

<400> 1571						
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gttggcgacg	cggttaaagg	tggcagcatt	tgacctggaa	acacatggga	tttttttcag	120
agtgaagaa	gaagcagatg	atgagattat	cgttgaatct	gtagatgtta	accgggacag	180
ggttttggta	gcgtcaaatg	acggtaaatg	tagggttcgt	cgaatgagga	cactcgaaaa	240
catatgcacc	ttaccgtttg	acggtttagg	cggagcagat	gataacagta	gcggtagtaa	300
taacaataac	aatagtagaa	aaattcttgg	gactttgaat	acatggctgg	catttgtctg	360
cattgacggg	gtggtgcacg	cttgggacgc	tgacagcggc	gcacgactct	accgtttggg	420
agaacaagtc	ggcgatgtgt	tcgatttggt	atcagacaat	gaacacgtg		469

<210> 1572  
 <211> 337  
 <212> DNA  
 <213> Pinus radiata

<400> 1572						
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gaggaggcta	atgaagcagg	cagtgaattc	caggcacaat	tttgcctgcag	cccacattgc	180
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cagtgcctat	aatggcaatg	ctattgaaga	agcgccaca	ccaatgccag	cgacccatt	300
aacagcatct	catcgccatc	ccatgaaatt	ccatcct			337

<210> 1573  
 <211> 341  
 <212> DNA  
 <213> Pinus radiata

<400> 1573						
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gaatatgtac	tgtagtctca	ctattctgga	gtatgacact	gaggaaggga	gtagttaga	120
ttgggaatgc	gacatgtccg	aggaagaaga	agatcttata	atcagaatgt	acaaacttat	180
cggcaacaag	tggtcgctga	ttgccgggcg	cattcctgga	agaaaagcag	aggagattga	240
gaggtactgg	gccatgagaa	cccaacaatt	gtgcggcggc	gatgatgcta	ttttgacgaa	300
gaaacagcag	aaaaccaata	tgatatcgat	taagtaccgc	g		341

<210> 1574  
 <211> 479  
 <212> DNA  
 <213> Pinus radiata

<400> 1574						
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actcggccag	gaggaggagg	aggaatatca	ttacatgtta	gcagcgtgga	atattgccag	120
aagagtgcct	gtgttgccca	tgatatctct	tctgatgaac	aagatctgat	aaatagactt	180
cacaatcttc	tgggcgacag	gtgggcactg	attgcggggc	gccttccatg	gagaagaaga	240
gaggagattg	agaattactg	taaaatgaga	tacacagcca	ctacctcttc	ttcacgctct	300
tgaatctccc	tttctctcgc	caggttatgg	agtgtggacc	aactatcgta	atcagatagt	360
ttgggttgat	tcagattggt	taggtttatc	tccacttgaa	aatatgtgtg	gatatttggt	420

tgtttgtttt atcaaaacca agtatagaag aaataaaatt tgatcgtttt atcgattta 479

<210> 1575  
 <211> 402  
 <212> DNA  
 <213> Pinus radiata

<400> 1575  
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 accattggag cagcatctcc cgccaaccag ctttcttctg atggatatgg caacagccat 180  
 ggagacaact caacagtatc gccaatctct tatgggttgg acgtaagtgt aagaggcagg 240  
 aaaagaggtg gaccgggtgga gaaagtagtt gaaagaaggc agagacgtat gataaagaat 300  
 agagaatcgg cagcaaggtc gcgagctaga aaacaggcat ataccggtt aattggaagc 360  
 ttgaagttag cagacctcaa agaagagaac aaggaattgc ga 402

<210> 1576  
 <211> 355  
 <212> DNA  
 <213> Pinus radiata

<400> 1576  
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 gccatcgttg gagaagccgt cgctgctccg cttgcgagcg gcgtctaagc tgctgatttc 120  
 gtcgtccagg tggacaacga tgcccttttc ggggtcccgg cagcgccctc gtagcgtgga 180  
 gttccagtgg ttcttgatcg cgttgctcgt gcggccgggg agggctcggg caattgttgc 240  
 ccatttgttg ccgtgctgcg cgtgggcctg cagaatagca gcctcctcgg acggggtaaa 300  
 aggtctgtgc tccacctgag ggctcagctg attgcaccac cgtagcctgc acgat 355

<210> 1577  
 <211> 463  
 <212> DNA  
 <213> Pinus radiata

<400> 1577  
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 acaagggagg aagcttgaaa atgactcgcc accagaaacg caaaattgat gaaatccacg 120  
 ttgaagaggg tcaggggtcat gaggattttg atcctgctag ccttcgagag catgaggagt 180  
 ttacgaaagt taagaacata gcaaaggtag agcttgggag gtatgagatt gagacgtggg 240  
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 gtctcaattt catgaagagg aaagaacagc ttcaaagaca tatgaggaag tgtgatctga 360  
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<210> 1578  
 <211> 343  
 <212> DNA  
 <213> Pinus radiata

<400> 1578  
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 aagcatatat tggctaagca aactggcctt acaagaagtc aggtatcaaa ttggtttata 240  
 aatgccaggg ttagactatg gaagcccatg gtggaggaga tgtacatgga agaactcaag 300  
 gaagaaaaag tggaccaagg tacacacaat tctgaagctg aaa 343

<210> 1579  
 <211> 530  
 <212> DNA  
 <213> Pinus radiata

&lt;400&gt; 1579

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tgagaaactg	gcagagcttg	caacgggtgga	tccaaaaacgt	gtcaaaaagg	atattggcta	480
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&lt;210&gt; 1580

&lt;211&gt; 561

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1580

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cgccattatt	acagcgggat	g				561

&lt;210&gt; 1581

&lt;211&gt; 357

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1581

cccagaacgg	cataagcact	gacaaaggat	tttaagatct	gtgcgatgtg	ggatatggat	60
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aaaatttttg	aaaatgctct	agctgatttt	gataaagaca	ccccagataa	atgggagaaa	180
gtggcagcca	ggctgcctgg	aaaaactgct	acggatgtta	gaaagcatta	tgaagatctc	240
gtggaagatg	ttacttgtat	tgaagctgcc	gcgttgccct	acccacgtac	agtaactctt	300
cctgttcaca	tgaatggtta	gaaaaatcag	gcgctatgca	cggattgaag	caacaat	357

&lt;210&gt; 1582

&lt;211&gt; 522

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1582

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gaggacgaat	cccgggccgt	caaagaaacc	catttcaggg	gcgtgcgaaa	acggccgtgg	180
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cacaaagcta	agaccaattt	ttctgtcacc	gccgactacc	acaataacgc	tggtgcgccc	360
gcacttttct	ggactcaggc	gctgcattct	cagcagccgg	atctgaacgc	cgcggttttt	420
gcttttcgtat	caaacaagag	acgtgaagtt	tcctctggaa	gcgaccggct	cgagttcgaa	480
tctcccaaca	attctcttca	cgctgcacct	ctgagcaggc	gg		522

&lt;210&gt; 1583

&lt;211&gt; 530

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1583

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&lt;210&gt; 1584

&lt;211&gt; 435

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1584

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tcctcgtagt	cttgggtgtc	acattagctt	tgtcagatct	gtaaacctgg	actcatggac	300
tcctgaacag	ttgaagggtc	tgagctttgg	tggaatggc	cgaggacata	cattctttaa	360
gcagcatggt	tggaatgatg	gaggtaaaat	agaatcgaaa	tacacatcaa	gagcagctga	420
gctatataga	cagct					435

&lt;210&gt; 1585

&lt;211&gt; 362

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1585

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ggaatataca	aagctttgaa	ttgtaaaagc	ccaccaagca	ctgatacttt	atctgccatg	120
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ttgcgcataa	ctgcagtaga	tgattctgaa	gatgtaagat	atatttcttg	gggattggat	360
aa						362

&lt;210&gt; 1586

&lt;211&gt; 362

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1586

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&lt;210&gt; 1587

&lt;211&gt; 389

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

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 <211> 416  
 <212> DNA  
 <213> Pinus radiata

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 cattttcctt cgcgcctgca gcccggggcg tgaccgtcgt cgcataggcc aagaaggccg 180  
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 atctacatga gtttggtgac acaaccaatg gctgcatatc aacaggagca cattttaatc 360  
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 <212> DNA  
 <213> Pinus radiata

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 gaccgggcat cttgctcgtg actgcaccaa caaccagtt tgtaatttgt gcaatatatc 240  
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<210> 1590  
 <211> 370  
 <212> DNA  
 <213> Pinus radiata

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 atatttgctt agaattagcc caagatcctg tggtgactca atgtgggtcat cttttttgtt 240  
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 ctgatccaag 370

<210> 1591  
 <211> 308  
 <212> DNA  
 <213> Pinus radiata

<400> 1591  
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<210> 1592  
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 <212> DNA  
 <213> Pinus radiata

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 <211> 378  
 <212> DNA  
 <213> Pinus radiata

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aggatattct	aggtcacctg	ctatacactg	caaaagttat	tgcaaagcag	gaagggtttat	300
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<210> 1594  
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 <212> DNA  
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<400> 1594						
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gcagttgaaa	ttgatgagct	ttggtggtaa	tggccgtgca	caattattct	ttaagcaaca	300
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<210> 1595  
 <211> 356  
 <212> DNA  
 <213> Pinus radiata

<400> 1595						
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aaataacatg	cagaggcatg	aggagatccg	aaggctaacg	aattgccgtc	acatcttcca	300
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<210> 1596  
 <211> 378



&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1596

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cagtgcgatg	cctgcgagca	ggcagctgct	tcagtgatat	gttgtgcaga	cnaggctgct	180
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gcagccatcg	ttttctgtct	cgaagatcgt	gctatgctgt	gccaaagactg	cgatgagtcc	360
gttcattctc	gcgacaca					378

&lt;210&gt; 1597

&lt;211&gt; 387

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1597

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acgacggaag	gcacgaacag	agtcaacggg	gatcggttca	gccagaggaa	aggtgagaaa	180
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tcaacagggc	tcgtgattcc	taatgttcac	aatctaaaag	cggattttaa	agcgcaatat	300
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gcacagattg	agccaaagtc	cagagag				387

&lt;210&gt; 1598

&lt;211&gt; 276

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1598

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ctagtccagg	cttccagtc	gacaatgatc	caaataatac	aactatattt	gttggtgggt	240
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&lt;210&gt; 1599

&lt;211&gt; 374

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1599

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aaaaggatga	agactttgtt	gcagaaaacg	atgatgtctg	atctccaaca	gatgagtcag	120
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gtgacccaag	aatg					374

&lt;210&gt; 1600

&lt;211&gt; 334

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1600

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caattatgaa	accctaaggt	caaagttaga	cgtattgaaa	ttaatacaat	tggggctgac	300
gttttctgat	gaaacggcaa	cctcccaaac	tgcg			334

&lt;210&gt; 1601

&lt;211&gt; 401

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1601

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&lt;210&gt; 1602

&lt;211&gt; 462

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1602

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&lt;210&gt; 1603

&lt;211&gt; 358

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1603

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caagatcttt	tccttggtat	catcaatcag	cttgaccag	agagttttgc	caatctga	358

&lt;210&gt; 1604

&lt;211&gt; 358

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1604

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&lt;210&gt; 1605

&lt;211&gt; 461

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1605

gcggaacttta	ttgtaaaaga	gccaatgggtg	attgggtcatg	agtctgctgg	aataattgag	60
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&lt;210&gt; 1606

&lt;211&gt; 463

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1606

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&lt;210&gt; 1607

&lt;211&gt; 410

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1607

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&lt;210&gt; 1608

&lt;211&gt; 357

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1608

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&lt;210&gt; 1609

&lt;211&gt; 222

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1609

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 <212> DNA  
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 <213> Pinus radiata

<400> 1614  
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 aatttcgaag atggtttagat cttcttgcta ttcaaagcaa ggtcataggc gtgggatttg 120  
 gacccctatg gaggatatga ttctctctga atacattcga attcatggca gtgatggatg 180  
 gaaaaatata gctaaacgag caggctcttaa acgatgtgga aagagttgca gattaccggt 240  
 gggtgaacta tcttcgcccc gacattaaac gtggtaacat ttctcctgat gaggaggacc 300  
 tcattattag gttgcatggc cttcttgga atcgaggac gactaccggg tcgaacagac 360  
 aacgaaatca agaattactg gcacactcat atgag 395

<210> 1615  
 <211> 231  
 <212> DNA  
 <213> Pinus radiata

<400> 1615  
 ttacattcaa ccaagctcat cacatggcgt cgganaagga agctgctctt gctgccacac 60  
 caccagaaga tgataaacct acaatatctg acnaaatact gcngaaagag attcccaatn 120  
 cagnggttta caaggatgag aaggctactn cnttcaggga tatngcnccc caagcaccta 180  
 ctcacatcat tatcatcccc aaagtaaggg atggccttgac tggcctatct a 231

<210> 1616  
 <211> 396  
 <212> DNA  
 <213> Pinus radiata

<400> 1616  
 ccggtccggg cgggtggagag catcagcctt ggagttacag accaggaaaa tacaagatgg 60  
 gtagatctcc ttgctgctcc aaagaggggc tcaaccgcgg ggcttgacc aaaagggagg 120  
 atatgattct ctccgaatac gttcgaattc atggcgatgg tggatggaga aatcttccgg 180  
 aaaaagcagg tcttaagaga tgtggaaaga gttgcagact acgctgggtt aactatcttc 240  
 gtcccgatat taaacgcgga aacatttgcc ccgccgagga ggagcttatt attcggctgc 300  
 atcgccctct tggcaatcgg tggctactga tagcaggacg actgcctggg cgaacagaca 360  
 acgaaatcaa gaactactgg aacactcatc ttgagc 396

<210> 1617  
 <211> 296  
 <212> DNA  
 <213> Pinus radiata

<400> 1617  
 gtcggcgctg gcgggcggtg cgaggaaaacg gcgggcgctcag ctgtgaagga aacgcatttc 60  
 anaggcggtga ggaagaggcc gtgggggaga ttcgctgcgg aaatcagaga tccctggaag 120  
 aagacgagac tctggctcgg cacttttgac acagccgaag aggccgcccg cgcctatgat 180  
 aatgccgcca gaaatctacg cggccccaag gccaaaacca atttcgctat ccacgacgat 240  
 agcgcccgcg ctgttcaaca gtggcggcgg acgcgcgcgtc cctagtcagc gacaag 296

<210> 1618  
 <211> 381  
 <212> DNA  
 <213> Pinus radiata

<400> 1618  
 gagctttctc tcaagaacat tcttacagca aatgagcaga ctacaactgc agaaccacaga 60  
 aataataata cagttgtttt cctggaatct attactaatc catctgtcag agttgcggat 120  
 ttaccgtcta tttccactgt atgtaaaaaag tatggagcat ttcttatagt agataataca 180  
 tttgtacac cgataaggat caagcccatc aagcaggggtg ctgacatggg cattcattca 240  
 gtaacgaaat ttcttggtgg ccatagtgat ctgggttgag gagtagttgc aggtctctct 300  
 caccacatag agttagcctc aaagctggta ggctgcgtgg ggctgcttgc tgctccattc 360  
 gattcatggc ttgccactcg c 381

<210> 1619

<211> 373  
 <212> DNA  
 <213> Pinus radiata

<400> 1619  
 cggtccatgt gacttcgaca tccatgagtc ctgcgcccac gctcctaacg ccactctcca 60  
 ttctctgtcat cccagcatc ctctcgtgtt gagggacaaa ccagtttcac cacaacgcgt 120  
 atgcgacgtc tgtggaaggg atgttttagg attcgtttat gactgccgtg aatgtgacgt 180  
 ggacgttcat ccctcctgtg cacagctgcc gcagacgctg cgccacgctc tgcattccaca 240  
 ccacaccctt caactctccc atggacctga agctcccgcc cctcctgcac gctcctgtaa 300  
 cgtatgcgga gaagcctgta gccctgggca ctggagctat cgttgcgaaat tagccagtgc 360  
 gccgtgtgat ttc 373

<210> 1620  
 <211> 137  
 <212> DNA  
 <213> Pinus radiata

<400> 1620  
 cacgggttcc agaccttttg catcttcatt attcttccgc ctgtgaaaag atggggagat 60  
 ctccgtgctg tgagaaggct cataactaaca aaggggcctg gactaaacaa gaagatgacc 120  
 gccttatcgc tcacatt 137

<210> 1621  
 <211> 372  
 <212> DNA  
 <213> Pinus radiata

<400> 1621  
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 aattttcgaag atggttagat cttcttgcta ttcaaagcaa ggtcataggc gtgggatttg 120  
 gaccctatg gaggatatga ttctctctga atacattcga attcatggca gtgatggatg 180  
 gaaaaatata gctaaacgag caggtcttaa acgatgtgga aagagttgca gattacgttg 240  
 gttgaactat cttcgccccg acattaaacg tggtaacatt tctcctgatg aggaggacct 300  
 cattattagg ttgcatggcc ttcttggaac tcgcaggacg actaccgggt cgaacagaca 360  
 acgaaatcaa ag 372

<210> 1622  
 <211> 464  
 <212> DNA  
 <213> Pinus radiata

<400> 1622  
 ctgaattgca tttcttagtc ggcaaaaata ttaaagagtc aagacaaaaga ggggggttacg 60  
 ggagcaggct gcgggttcga tccaagata aggaaaaaag aaagaaaatt tcatgaattg 120  
 ggctctgtaga ttccagtcac gaaattaaaa cctatcggtc tcgtcttcga gctaaagttg 180  
 gggaaaaagc taagctctca gggaaatgggt tcccgacaaa tgctgtcctc taatgggtggc 240  
 cggacacctc agttccaacc actcgttcgt cagaattctt tatacaattt aacgctggag 300  
 gaggtccaga accagctcgg ggacgccagc aagccactta gcagcatgaa catggacgag 360  
 ctctgaaga acatttggac acaagagaaa gccaggctat atccatggcg atcggcaatg 420  
 ggcccatgaa cgggtgttcct cccaactctg cccctgccag cgggt 464

<210> 1623  
 <211> 436  
 <212> DNA  
 <213> Pinus radiata

<400> 1623  
 aagaaaaatg ggctgaatag tctcaggag gggttttaaat tgaatgagta gggttttctg 60  
 ggggtgagatt ctttcatatt tatgcgtaaa acgttgactc caatcggcgt gaaacaaacc 120  
 aatagaaatc ccaaattgat ttctttcaat ttcatctgat acacagagag aattcagtca 180

gtggaagtca	tgtctaacat	aacgtctgcc	tctggagagg	ccagcgtttc	ttctggcaat	240
acagctgcc	tggctgatag	tgagagcatt	cggcaacagc	caccacaaca	attctcaaca	300
ccaacgtctg	caaattggcg	cggaaatata	aacagtgtct	agcaaaaccc	agagaagaag	360
agaaagagaa	atcttccagg	aactccagac	ccagatgcag	aagtgattgc	tctgtcgct	420
aggactctca	tggcta					436

<210> 1624  
 <211> 337  
 <212> DNA  
 <213> Pinus radiata

<400> 1624						
gccagagctg	tggctgttcc	cagaagagga	tatcatcagc	tgtccagttt	gtcctaagag	60
actacagaag	aagaatatag	aagatgggta	gatccccctg	cccccaaaa	gaagcgctta	120
accgtggggc	ttggacaggc	atggaggata	cgattctcac	cgagtacatt	cgagttcatg	180
gcagtgggtg	ctggaaagat	atctccaaaa	gagcaggtct	taagaggtgt	gcaaagagtt	240
gcagattgcg	ttggctgaac	tatcttcgtc	ccgatattaa	acgtggtaac	atttctccc	300
aggaagaaga	gctcattatt	cggttgcac	gccttct			337

<210> 1625  
 <211> 421  
 <212> DNA  
 <213> Pinus radiata

<400> 1625						
ctgaagtgcc	gtcgattgtt	cgggaggata	gcgttttcga	agttcgttgt	tgagttatct	60
cgcgagactg	tagaatttta	gggttggttt	ccacaaaccg	acttttcccg	acttcaaatc	120
ttgatattga	agtgcattgg	ccggcgagaa	aagaaagatt	aatagaatag	ctaacgcttc	180
ggccaggcag	gtcaccttcg	cgaagaggcg	gagggggctg	ttcaaaaaag	ctcaggagct	240
atcgatttta	tgcaagccg	atgtagccct	cctcggtttt	tcttcaactg	gaaagctgta	300
ccagtactcc	agctccagca	tgaaaatgat	attggaccag	tatattttgt	attctagatc	360
aattcaaaag	gatggaaagc	caaactctga	ggagagtcac	gatatccaaa	agataaacca	420
c						421

<210> 1626  
 <211> 315  
 <212> DNA  
 <213> Pinus radiata

<400> 1626						
tgcatttcag	ccagtcctatg	gtttcaagg	cgaatctcct	tgctgacatg	aatccatcaa	60
tatatataga	gagagagaaa	tatacgtttt	tcagatttaa	gcatggccgt	ttaataatct	120
gcattgcatg	gagagattgt	atttgtgtta	gaagttgatt	ttctgttttt	tctctttcag	180
ttagttagtc	caataaagca	gagatgggtc	gtgctccatg	ctgcacaaaa	gttgggtctca	240
acaagggagc	atggctctgcc	gaagaggata	gtcttctggg	aagatatatt	caaactcatg	300
tggaaggcaa	ttgga					315

<210> 1627  
 <211> 373  
 <212> DNA  
 <213> Pinus radiata

<400> 1627						
cacatccata	catgtgggg	ggacagccgt	tgatgccacc	ttatgggact	ccactaccat	60
atcctgcaat	gtatccacat	ggaggaatct	atgcacatcc	ttccatgcct	cgggtgcac	120
ttcgtatgg	tactatgga	atgccatcac	ctggcaatgc	tgaagttaca	acgactttag	180
cacttccaaa	tgctgaagca	gaagccaagt	cctcggaagg	caaagagcgg	aatacaatga	240
agagatcaaa	aggaagttaa	ggaagccttg	gaatgattac	tggcaaagga	ggagaagggtg	300
gcaaggcaac	atcgggatct	gcaaatgagg	ccatgtcaca	aagtggggac	agtggcagtg	360
acggttcaag	cga					373

<210> 1628  
 <211> 512  
 <212> DNA  
 <213> Pinus radiata

<400> 1628  
 cggtaatagc atagagggat tatacagagg tggattgtta ttgaaaccca gtagtggagg 60  
 tagagtcttg acaagttggg acaaaggagg gaattccacg gatgttatag atatggatat 120  
 agggactggg agactaacag gttctgaaag gagacatgac aaacggaatc ctacattttac 180  
 agaccattat agacattcag acagtgatcg aatgaagatg aacagctact tatatccaga 240  
 aaacaacaat agcacggcgc ttgttgcgct tctgtttgtt cccaggaacg acaaacttgt 300  
 aaagattgat ggcaacctta taatccatgc agttctagct ggggaaaaag cctcgagagc 360  
 attatctgcc tcacagtcta gaggcaacaa agatgggcat gtagacacca tttcacttca 420  
 aaaggaatat gaaaagaata gtttggcagt cagaacagaa aggcacgtg ctcttgctgc 480  
 tgctgccgcc gccactacag attcagccag aa 512

<210> 1629  
 <211> 395  
 <212> DNA  
 <213> Pinus radiata

<400> 1629  
 gagaaaaagg acctgaccat atcgaaacat tcacaggggg agattgatca aacacaaata 60  
 ccgtaaaatc gcagcgaaaa tccaaaattc caccatgggg actgtggcgg aggatggcag 120  
 caagggttac aaggccgtaa atccccatcc caaaaagggc gtcgcctcgt ggctgggtgga 180  
 catgggtggag aaactgggtg ttgaaacttc tgcgttgtat agttcgaaga agcctctgca 240  
 ttttcttttg gggaacttcg ctccagtctc ggaaactgcc cccaaatcgc acctgcctgt 300  
 tgttgggcaa ctctctagtt gcttggatgg agagtctgtg cgcgttggtc ccaatccgaa 360  
 attcgcaccg gtagctggct atcactgggt tgatg 395

<210> 1630  
 <211> 285  
 <212> DNA  
 <213> Pinus radiata

<400> 1630  
 ctctgcattt tcttttgggg aacttgcgtc cagtctcgga aactgcccc aaatcgcacc 60  
 tgctgttgt tgggcaactt cctagttgct tggatggaga gttcgtgcgc gttgggtcca 120  
 atccgaaatt cgcaccggtg gctggctatc actggtttga tggagatgga atgatccatg 180  
 gtctcagaat taaagatggt aaagccacat atgtgtcacg ttatgtgaag acatcacgct 240  
 tgaaacaaga ggaatacttt gggaaagcaa aattcttttaa gattg 285

<210> 1631  
 <211> 438  
 <212> DNA  
 <213> Pinus radiata

<400> 1631  
 gtttttcaaa gctcaggttt aacagaaaat acccgggaaa attaacaaga aaaaaggaaa 60  
 aacagagatt ttgtttattt ctgttattag tctgctaaat tgggttttga taatttaatt 120  
 aattaaggcg ggggcccgc cctccaggca gtggcggaaga ccagtgggcg gccctgccac 180  
 ccgaggagga gagccgcgtg cgttttctcg acttcgaacc cgcggctatg gaggcgctgg 240  
 atcaggtact ctgcctgcgt ctcggtgaag ttgctgaagg ccaactgggga gaagccggcg 300  
 gcggcgaaca gggctctcca tggcggagcc ggccggcgag gaaatgggtg cgtcgatctt 360  
 cggagctagc aggaacttct cgatcttgtg cacggcctcc atgttgatgt tcacggcatc 420  
 cagtgaatcg aacaggaa 438

<210> 1632  
 <211> 457  
 <212> DNA  
 <213> Pinus radiata



<400> 1632  
 ccatatcgaa acattcacag ggggagattg atcaaacaca aataccgtaa aatcgagcgc 60  
 aaaatccaaa attccaccat ggggactgtg gcggaggatg gcagcaaggg ttacaaggcc 120  
 gtaaattcccc atccccaaaa gggcgctgcc tcgtggctgg tggacatggg ggagaaactg 180  
 gtggttgaaa cttctgcgtt gtatagtctg aagaagcctc tgcattttct tttggggaac 240  
 ttcgctccag tctcggaaac tgccccaaa tcgcacctgc ctgttggttg gcaacttcct 300  
 agttgcttgg atggagagtt cgtgcgcgtt ggtcccaatc cgaaattcgc accggtagct 360  
 ggctatcact ggtttgatgg agatggaatg atccatggtc tcagaattaa agatggtaaa 420  
 gccacatatg tgtcacgtta tgtgaagaca tcacgct 457

<210> 1633  
 <211> 318  
 <212> DNA  
 <213> Pinus radiata

<400> 1633  
 aattgttgat aatcagattc cattgagtgg acctgattca gttattggta gggcacttgt 60  
 tgtccatgag ttagaggatg acctggggaa aggtgggcat gaacttagtc tgacaactgg 120  
 caatgctggg ggcagggttg cttgtggtgt ggttggactc actcccattt aaggcccagt 180  
 caaatatgga atgatcttca aaggctcatg acatcgtatg aaaccagtga ctgcaataat 240  
 aattccaaaa tatatgttct ttatcctcgc aagattgtta gcaattgtga tttgtttttg 300  
 gtattaacga gttgcact 318

<210> 1634  
 <211> 211  
 <212> DNA  
 <213> Pinus radiata

<400> 1634  
 gccgtggctg ttcccaggag aggagagcct cagctgtctc gatctggcgt taaggggtta 60  
 cagaagaaga atttcgaaga tggtagatc ttcttgctat tcaaagcaag gtcataggcg 120  
 tgggatttgg acccctatgg aggatatgat tctctctgaa tacattcgaa ttcattggcag 180  
 tgatggatgg aaaaatatcg cttaacgagc a 211

<210> 1635  
 <211> 350  
 <212> DNA  
 <213> Pinus radiata

<400> 1635  
 ggtttcttta tatttatgtg cagattgcct ggaacggacac ttgccaatgg acgtctcata 60  
 tggctgtgcc aggccaacga agcggacagc aaagtcttcc cacgtgctct tcttgctaag 120  
 agcgctctta ttcagactgt tgtatgcac cctctcgcgg acggtgtctt ggagtttggg 180  
 actactgaag tggagcgaga agaccctggg ctagtccaac gcaccataag cttttttttg 240  
 gagtacccca aaccgatatg ttcagagcaa tctacatcca gccacagtg ctccagacaga 300  
 gacgaaaagg atcaagtggg catggtcaca ataatgtcct ccgacagcat 350

<210> 1636  
 <211> 356  
 <212> DNA  
 <213> Pinus radiata

<400> 1636  
 ggttgctgga ttccaacgga aaggatttgc ctctttcatc agtctataat cgaggatctc 60  
 tgcagtcctt tactagtga ggtcattccg tttcaacagt aatcctccgt attgaaaagg 120  
 aggaagaaga gtttgtcttt gttgacattc ctgaaagacc aattccctct ctactacgca 180  
 attatagtgc tctgtgcgt cttgtttcag atatcactga tgatgatttg tactttctac 240  
 ttgcacatga ttcagatgag ttttaaccggg gggaggctgg ccagacattg gcaagaaaac 300  
 tcatgtctct tctcgtatg aaggcgcaac agaatacaacc attgagtgtg gaccca 356

<210> 1637  
 <211> 362  
 <212> DNA  
 <213> Pinus radiata

<400> 1637  
 cgaggctccg ttcaacccct ttcattcttca atcggtccaa ggccctcttcg gtctgcctgg 60  
 gtgcgtttct gaattttctcg ccaagtgaat gagtcgatcc agccttggtt cagcgaaacc 120  
 tgttggtggtt ttgggttttc ttggcttttg ccttttcatt ctttggttcc ttggattcga 180  
 actcgagatc tcctgaatat tatggcacag gagagctgga accaggagga gaccgggtgc 240  
 caagtcccgg aagggtcat gcgctgtgcc aacaactgtg gcttcttcgg aagtccggcc 300  
 accatgagtc tctgctccaa gtgttaccgc gaattcgtgc tgcctcaactc ccctaaatcg 360  
 tc 362

<210> 1638  
 <211> 359  
 <212> DNA  
 <213> Pinus radiata

<400> 1638  
 cgaaactcga atcgatatgc tttgtggccg gttcaaatat ttgagctggc ttagcttctc 60  
 tggttcagaa atggcggact aaagtaatat tgtgccccga ggtctgggtg tcgaatctcg 120  
 ttggcgtgaa aggtcaaatt tttctctcga gtttcattga ttctgaaaaa ctggcatagc 180  
 tatggcgatg agcaatggga gattgtgtga agatttggat aggattaagg ggccgtggag 240  
 ccccgaggag gacgcgtcgc tgcagaggct tgttcagaaa tacgggcccga ggaactggac 300  
 cctgataagt aaaggaatcc cggggcgatc cgggaaatcg tgcaggctac ggtggtgca 359

<210> 1639  
 <211> 299  
 <212> DNA  
 <213> Pinus radiata

<400> 1639  
 cgagcaacag cgaagccgat ttccaaagat ggatagggag aaactcatga agatggctgg 60  
 tgcagtcgc actggcggaa aggggtacaat gcgaaggaaa aagaagacaa ttcataagac 120  
 tgccacggca gatgacaaga gacttcaaag taccttgaaa agaataaggc tgaataacat 180  
 ccctgctatt gaagaagtca atatttttaa ggatgacat gttattcatt ttgctaacc 240  
 aaaggtccag gcttctattg ctgccaacac atgggtgggt agtgggcatc gcaaacaaa 299

<210> 1640  
 <211> 300  
 <212> DNA  
 <213> Pinus radiata

<400> 1640  
 gaaactatga accgcgcata aaatcgaagg cgaggagtgc tagaagaggc ggtgaagttg 60  
 aagttgttat ggggggaatt atgctggtcg ggtcgacgat gattcctgcg ggcggcgcgg 120  
 cggcagcggc ggagacgtcg gtggaggaag gaggagaatt gaataagatc gaaagcccta 180  
 caccatcacc aagtccagag aaagctggac tgagcaggag cacaacaaat ttctgcgaag 240  
 ctatgcagcc tgtttgatag ggactggaag aagaattgaa gcatttggtt gggtcacaa 300

<210> 1641  
 <211> 311  
 <212> DNA  
 <213> Pinus radiata

<400> 1641  
 gttcagctgt tcgcaaagca cggagcgaaa gtcataatcg cagacgttgc agagaaagct 60  
 ggcagaaagc ttgcagaatc cttttctcca gcacggcaa cttatgtgca ctgtgatgtc 120  
 agcaaagaag aagacgtgag cgcggctgtg gatctggcta tggataagta tggtaactc 180  
 gacattatgt ataacaacgc tggaactaac gacagcttcc tggatgaagag cgtggcagag 240

tatgatattgg agcaattcga tctgagtgatg aacgtaaacc tgaaaggagt gatgcacggc 300  
 attaagcacg c 311

<210> 1642  
 <211> 350  
 <212> DNA  
 <213> Pinus radiata

<400> 1642  
 agggatcagg caacgtccat gggggaaatg ggctgcagag atcagggatc ccagaaaagg 60  
 cgctagggtt tggtcgggta cctttaatac ggccggaggaa gctgctcggg cttatgatgc 120  
 agctgcacga aagatcagag gtaagaaggc gaaagtaaatt tttgttgatg agccaccacc 180  
 ctccgtttaag aaggaaagta ataatgctaa ggggttccaa aaagggtcca gcaagaaaat 240  
 aaaatcatat ctaccccaaa gcctgacttt ttcgaagggt tcaaaacggc gaacccttcg 300  
 attgcccaat acaacttcca tcagaaattc ccaaacccta actgtgatga 350

<210> 1643  
 <211> 322  
 <212> DNA  
 <213> Pinus radiata

<400> 1643  
 gacttttctt ccgaactgtt ctgctgaaac aaaatccagt attgagctag gtttagaatc 60  
 gggtttcttg gtcattctgg agaggcgatc cattcagctt cgcaggcccc cgaagatggc 120  
 gttcgccggc acaaccaga agtgcaaggc atgtgaaaag acggtctatt tggttgatca 180  
 attgacagct gataattctg tttttcaca atcctgtttc cgctgccatc actgcaatgg 240  
 aactttaaag cttagcaact attcgtcgtt tgaggagggt ctatattgca aacctcattt 300  
 tgaccagctg ttttaagagaa ca 322

<210> 1644  
 <211> 345  
 <212> DNA  
 <213> Pinus radiata

<400> 1644  
 gccgaaactc gaatcgatat gctttgtggc cgggttcaaat atttgagctg gcttagcttc 60  
 tctggttcag aaatggcgga ctaaagtaat agtgtgcccc gaggtctggt gttcgaatct 120  
 cgttggcgtg aaagggtcaaa tttttctctc gagtttcatt gattctgaaa aactggcata 180  
 gctatggcga tgagcaatgg gagatttgtt gaagatttgg ataggattaa ggggccgtgg 240  
 agccccgagg ggacgcgtcg ctgcagaggc ttgttcagaa atacggggccg aggaactgga 300  
 ccctgataag taaaggaatc ccggggcgat ccgggaaatc gtgca 345

<210> 1645  
 <211> 508  
 <212> DNA  
 <213> Pinus radiata

<400> 1645  
 cgtgtcaaag cccaaacgac ccgtttcaac gcttataaca tattatgtga gtatcggagt 60  
 ggaaaggcag caccgagaaa catatccgag gagaaagtat actcatatat taacgtaacg 120  
 gaaaatggaa ataattgatg tcaaggcaaa ggtattacag aggtccatcc tcatcccaag 180  
 aaaggcatcc tttcatcggg aattgatttg gccgagaaaa tctgtggttcg ctcgctctac 240  
 ggctccgcca aacctctgca ctacctcgtt ggtaatttcg caccgggtcg acaagaaact 300  
 ccgcccgcaca cagacttgtc cgtcattgga aatctcccta aatgcttggg tggagaattt 360  
 gtgcgagtcg gtcccaatcc cagattttgc ccccgctcgt ggctatcatt gggtcgacgg 420  
 agaccggaat gctcatgggt tgaggattaa agatggcaaa gcagcttatg tttcgcgttt 480  
 ccgtcaaaac ttcacgtctc aagcaaga 508

<210> 1646  
 <211> 368  
 <212> DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1646

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gaaaaagaaa	atacaagatg	ggcagatctc	cttgctgctc	aaaagaagg	ctcaaccgtg	120
gggcctggac	caaaagggag	gatatgattc	tctccgaata	cattcgaatt	catggcgatt	180
gcggatggag	aaatatgccc	aaaagagcag	gtcttaaacc	gtgtggaaag	agctgcacga	240
ttacgatggc	tgaactatct	tcgccccgac	attaaacgtg	gaaacatttc	ccctgatgag	300
gaggaactca	taattcggct	ccatcgctt	cttggcaatc	gatggtcgct	tatagcattg	360
aagattac						368

&lt;210&gt; 1647

&lt;211&gt; 367

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1647

cttcccttca	tcagatgttt	cccaggctgc	actcatcagc	tgcagcacca	cgcggttttg	60
gattctccct	gttctttgtt	ctgttgctgt	aaagattggg	tgcaggctga	atcgcccagg	120
ccgatttgaa	ttctcctgag	gattgacaag	atgacgcgca	agtgcctcga	ctgtggcaac	180
aacgggcata	actccaggac	gtgccctaac	cgcgggcggg	tgaagctctt	cgcggttcgg	240
cttaccgatg	gcccgatcag	aaagagcgct	agtatgggga	atttgatgat	gatgtccaac	300
cctagctctc	ccgctgacct	ctccnagccg	gcctctgcgc	cttctgctgc	cgcgggcgcg	360
gcggcca						367

&lt;210&gt; 1648

&lt;211&gt; 511

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1648

gtggctcttc	ccggcagacc	tagtaagccg	actactgtaa	atttattctt	ttagggttac	60
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ggcgatgga	gaaatatgcc	caaaagagca	ggctcttaaac	ggtgtggaaa	gagctgcaga	240
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gaggaactca	taattcggct	ccatcgctt	cttggcaatc	gatggtcgct	tatagcagga	360
agattaccag	gtcgaacaga	caacgaaatc	aagaactact	ggaacactca	tatgagcaag	420
aagctgcttc	cattgaacga	atctcaaccc	aagactttgc	ctgtccccaa	gaggaggtcg	480
caatctcctt	ctccccctga	aaatcgagtc	t			511

&lt;210&gt; 1649

&lt;211&gt; 364

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1649

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cagctgcaat	ccatgtaact	gttcaaagat	tgacgagact	gttagtgagg	aatccttctg	120
taaatgtgga	gagaattgag	cctgtgaaac	atgcacctgc	agcagagctg	gaatatagcc	180
tagttgattg	tttttctcag	ccagaactta	ggattccatg	accactagta	ataagatgca	240
gtatcaatag	cagctgatgt	ttatgtatgc	agtaagttta	taaaagagag	tggttacttt	300
ttggctttag	taatttggtg	cttatgttat	gtatgtagta	agtttatctc	caaatacaga	360
gccg						364

&lt;210&gt; 1650

&lt;211&gt; 354

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1650

caagagtaaa	ccogaaggaa	tagaagggga	aggaggcatc	ggcagcggtg	ttcctcctcc	60
tctcctctcc	tgcatttctc	aaactcaa	acctctcctc	tcacatcatg	gaaggcggag	120
tcgtctttga	atctgtgcaa	aaccactgg	atcgctgaa	caactggaaat	atggaccatg	180
gttggtgccc	ttacaggaga	cgatgtcgga	ttcgggcccc	ttggtgcaat	gagatctatg	240
attgtaggca	ctgtcacaat	gaagccatga	gccatctaaa	ggacccttg	ctgcgccatg	300
agctcccaag	atacaaagtt	gaacgggtta	tttgttctct	ctgtgacact	gagc	354

<210> 1651  
 <211> 424  
 <212> DNA  
 <213> Pinus radiata

<400> 1651						60
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tactacaag	ccttttagcaa	gcctcacaaa	taagctttgc	agtaggatgt	ctcctcccc	180
gtcatattcc	atgtttccca	attcaggaat	gggcttaaat	ccctcagtga	catcttcaga	240
accctctagt	caggtctccg	gatcgatccc	ccatcaatat	tcaggctccg	aggaagaccc	300
taaactgacg	atcgatgaaa	gaaagcagaa	gagaatgctt	tctaacagag	aatctgcaag	360
gaggtccaag	atgagaaagc	aacagcattt	ggatgaattg	agagcccgaa	cagctcatct	420
cagagcagag	aacagtcata	tgctaacaaa	attcaacatt	gcttcacaga	aatacatgca	424
gctg						

<210> 1652  
 <211> 422  
 <212> DNA  
 <213> Pinus radiata

<400> 1652						60
gtcaatgctg	cccgtcgaac	tggaggccct	attgaaacta	tcaagaaatt	taatgcagga	120
tcaaacaag	cagcctcgag	cagcaccacc	ttgaacacca	agaagcttga	tgatgagaca	180
gaagttctcg	ctcatgaaag	agtttcatca	gatttgaaga	aaaacataat	gcaagcccgt	240
ttagataaaa	agttgacaca	agcccagctt	gcacagcaaa	tcaatgaaaa	acctcagatt	300
attcaagagt	accgagtcgg	ggaaagcaat	tcccaatcag	cagatcattg	ccaagctgga	360
aagggtcctt	ggtgtgaaac	tgcgtggaag	cactggaagt	ggaaagaaat	aactggaagt	420
atgcaatagc	aataacatgt	catagagttg	tgtgatttgg	cgttcaccac	ccacacctgc	422
tt						

<210> 1653  
 <211> 357  
 <212> DNA  
 <213> Pinus radiata

<400> 1653						60
gnacgagctc	gatctggcct	taaggggtta	cagaagaaga	atttcgaaga	tgggtagatc	120
ttcttgctat	tcaaagcaag	gtcatagccg	tgggatttgg	acccctatgg	aggatatgat	180
tctctctgaa	tacattcgaa	ttcatggcag	tgatggatgg	aaaaatatcg	ctaaacgagc	240
aggtcttaaa	cgacgtggaa	agggttgacg	attacgttgg	ttgaactatc	ttcgccccga	300
cattaaacgt	ggtaacattt	ctcctgatga	ggaggacctc	attattaggt	tgcatggcct	357
tcttggtcaat	cgatggtctt	tgatagcagg	acgactaccg	ggtcgaacag	acaacga	

<210> 1654  
 <211> 306  
 <212> DNA  
 <213> Pinus radiata

<400> 1654						60
gcgcattggt	cagctgtgtc	gcagaacacg	gagcgaaagt	cataatcgca	gacgttgacg	120
agaaagctgg	cagaaagctt	gcagaatccc	tttctccagc	atcggaact	tatgtgcact	180
gtgatgtcag	caaagaagaa	gacgtgagcg	cggctgtgga	tctggctatg	gataagtatg	240
gtcaactcga	cattatgtat	aacaacgctg	gaactaacga	cagctttctg	gtgaagagcg	300
tggcagagta	tgatatggag	caattcgatc	gagtgatgaa	cgtaaacgtg	aaaggagtga	

306

tgacg

<210> 1655  
<211> 368  
<212> DNA  
<213> Pinus radiata

<400>	1655					60
cttcagtttg	ccattgaaga	ccaataaaata	attattgtga	agcagcagcg	ttttaatcag	120
agatccagca	agaagaggac	caggaaaaat	catttgcaga	acaagaagat	aatccaagat	180
gtcaagcaca	cgcagccctc	agtgtggggt	cggagaaaact	tgcgcttgcg	ccgattgcaa	240
gtgtggagtt	gtgagtattg	cgcctccatc	cgaccaaaca	agtgggggac	atgcatattg	300
caagtgtgga	gaacactgca	gctgcaatcc	atgtaactgt	tcaaagattg	acgagactgt	360
tagtgggaaa	tccttctgta	aatgtggaga	gaattgcgcc	tgtgaaacat	gcacctgcag	368
cagagctg						

<210> 1656  
<211> 333  
<212> DNA  
<213> Pinus radiata

<400>	1656					60
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agtaagctat	agattgatag	ttcagagaaa	agactgaaag	gcaaaaaacta	tatagacata	180
acaacggaga	gagcagcaca	ggaaccaggt	tgcataatgg	ctaggcctca	aagatacaga	240
ggagtcctgc	agaggcactg	gggatcatgg	gtctctgaaa	tccgccatcc	cttattgaag	300
accgaaatat	ggctaggaac	atttgaaaca	gcagaggatg	cagcacgagc	atatgatgaa	333
gctgcaagga	tgatgtgtgg	gccgagagct	aga			

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<210> 1657
<211> 355
<212> DNA
<213> Pinus radiata
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<400>	1657					60
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tctctctggt	gaaatcgtcc	ccgcaggagg	agggctgagg	gcagggtctg	gctcgggtctg	180
gttcgtttcg	gcaggagtta	tctcagggtt	tttctcttga	ttttctgcgc	cttcggactc	240
gggcttacag	ttacagcatt	tggaaaaatgg	cgtcacagga	gagctcaaaa	atgcaagagg	300
aagggagtgg	gagacaagtg	ccggaagggc	ccattcactg	tttgaacaac	tgcggcttct	355
tcgggagcgc	ggccaccatg	aacttgtgct	ccaagtgcta	cagagagctt	aacgc	

<210> 1658  
<211> 341  
<212> DNA  
<213> Pinus radiata

<400>	1658					60
ggggaatgat	tcttggccga	ggccatttga	gcgccataca	cattgcggcg	gactgcggga	120
agtattgttt	tcahtaattc	ccttaattgg	gtcccagaat	acgtttctcag	atccgaaaac	180
ggttcagtc	atcggaggtt	acagcgattc	gaaggcctga	aaaccctaaa	aatacctatc	240
cccctttgtc	tttgaatggc	ggagaactat	ggcagcccgg	atagcagccc	ccggtcggag	300
aacgaatccg	cgggcggtca	catgggcggc	agcgattttc	ctgtgaaaaga	gcaggatcgg	341
ttcctgccta	tagccaacgt	ggggcgcata	atgaagaagg	c		

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<210> 1659
<211> 353
<212> DNA
<213> Pinus radiata
```

<400> 1659

WO 00/53724

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gaaaaacaaa gcagaaagcc accatgtggt agaggaggtg ctgaggataa aggagcttct 60
tgatgattct taccagcctc aggaagtctt gctagagtca ctgcagagtt tgtttaacat 120
gcatatttct gtggaggctt tgaaggagac tgatattggt agacaagtga atggactgcg 180
aaaacattct tctgctgaca ttcgaaagct agtaaaagag ctcataagga agtggaaaga 240
tcttgtcgat gagtgggtaa gcaactgcaga tgaagttgca gctgctgcaa ttgttgatgg 300
agattctcca caaggtggtg gcagcagaat ttctcaacag agtattgtgc aga 353

```

<210> 1660  
 <211> 317  
 <212> DNA  
 <213> Pinus radiata

```

<400> 1660
caagagtaaa cccgaaggaa tagaagggga aggaggcatc ggcagcggtg ttctctctcc 60
tctcctctcc tgcatttctc aaactcaaat acctctctcc tcacaatcat ggaaggcgga 120
gtcgtctttg aatctgtgca aaacccactg gatcgctgca acactggaaa tatggaccat 180
ggttgtgccc attacaggag acgatgtcgg attcggggcc cttgttgcaa tgagatctat 240
gattgtaggc actgtcaca tgaagccatg agccatctaa aggaccctt gctgcgccat 300
gagctcccaa gatacaa 317

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<210> 1661  
 <211> 340  
 <212> DNA  
 <213> Pinus radiata

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<400> 1661
caatggcggc ccagactatc atcgtgcct ctatggcatc ttctctaaca ttatcaaattg 60
gccactatcc gtttcagtc gagttcaagg ggtccgtggt tcgaatcccg cagagggcat 120
tttcttcgca gcctgcagcc cgggcgctga ccgtcgctgc agaggccaag aaggccgttg 180
ccgtgctcaa aggggaattca caggctcgagg gtgtgtgcag tctctgcag gaagacagcg 240
gtcccacaac agtgaaggtc cgtttgacag gactgactcc tgggaagcat ggctttcatc 300
tacatgagtt tggtagacac accaatggct gcatatcaac 340

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<210> 1662  
 <211> 563  
 <212> DNA  
 <213> Pinus radiata

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<400> 1662
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atttcaacgg ccttataact atttggaag cagtactctg gatttttctc ccggaacgga 180
tcggagtgtg cgaagcgtaa taatcgctg gaatttgtct tctgcaagat aatattcaat 240
taatctattg tcgaaggaaa tttgagccgt ataagaggat aatcaaaaaga agccggttga 300
tttctccggg attaaaggat ggatcaagaa aactggaaca tcggagctga tggcactggc 360
tgccaactcc agaagggcac actctttgag ccaataactg cggctttttt ggcagttcgg 420
caacgagaaa cctgtgttcg aaatgttaca gggatctgat tatgaaggag gcccagcct 480
catctgcaat ggccgcccgt gagaagtcatt ttgccgcggg ttctccgatg gaggaggagg 540
cccctctttc caagccagat gtt 563

```

<210> 1663  
 <211> 572  
 <212> DNA  
 <213> Pinus radiata

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<400> 1663
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cattttcctt cgcgcctgca gcccgggcgc tgacagtcgt cgcagaggcc aagaaggccg 180
ttgccgtgct caaaggaaat tcacaggctg aggggtgtgt caatctctcg caggaagaca 240
acggtcccac aacagtgaag gtccgtttga caggactgac tctggggaag catggctttc 300

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WO 00/53724

atctacatga	gtttggtgac	acaaccaatg	gctgcatctc	aacaggagca	cattttaatc	360
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acatagttgc	gggttctgat	ggagttgcag	aggcaacaat	tggtgataat	cagattccat	480
tgagtggacc	tgattcagtt	attgggaggg	cacttgttgt	ccatgagtta	aaggatgacc	540
tggggaaagg	tgggcatgaa	cttagcctga	ca			572

&lt;210&gt; 1664

&lt;211&gt; 366

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

<400> 1664						60
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gccaacggtg	acagaagcaa	gggagcctgg	accaaggaag	aggatgacag	gcttacccaa	180
tatattcagg	ctcatggaga	aggatgctgg	cgttctctcc	ccaaggccgc	aggtctgctt	240
cggtgtggaa	aaagtgtcag	gctgagatgg	ataaattatc	ttcgccctga	tctgaaacga	300
ggaggttttt	ctgaagatga	agacgatctt	attctcaaac	tgcacgccct	cctcggaat	360
aagtggctctc	tgatagcggg	tcgtttgcct	ggtcgaactg	gccacaaaaa	tcaaaactac	366
tggaact						

&lt;210&gt; 1665

&lt;211&gt; 348

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

<400> 1665						60
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tgtggccagg	gagtgcacca	aggctcgcat	tttggatggt	antaggggtg	gaagatttat	180
tgacgatagg	cgtggaagat	ttaatgacat	aatctgtagg	acatgcaacg	agccagggca	240
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tgcatactaa	tgccctctg	gtcgtgtgat	gctgcgggac	atgcgcaggc	attgatgctg	348
caatttctac	aacaccttga	cttttttagat	tatctgattt	tgacaaa		

&lt;210&gt; 1666

&lt;211&gt; 422

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

<400> 1666						60
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cattcaccat	gtctgacata	tccatctcag	atttcacgag	gacctcta	aaactctttg	420
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ca						

&lt;210&gt; 1667

&lt;211&gt; 467

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

<400> 1667						60
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aagcagtact	ctggattttt	ctcccggaa	ggatcgaggt	gtgcgaagcg	taataatcgc	240
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cgtataagag	gataatcaaa	agaagccggt	tgatttctcc	gggattaaag	gatggatcaa	360
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tgcgccaaata	actgcggcct	ttttggcagt	tcggcaacga	gaaacctgtg	ttcgaaatgt	



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467

<210> 1668  
 <211> 465  
 <212> DNA  
 <213> Pinus radiata

<400> 1668						60
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tgtctctggg	atggttacac	agctgcctga	caaggatgaa	acatctgtta	ataaaacgca	465
attattagca	cgacttgatg	tttgtatggg	cggacgagtt	gcaga		

<210> 1669  
 <211> 421  
 <212> DNA  
 <213> Pinus radiata

<400> 1669						60
cgaaccatgg	agtctaagg	acaggcta	ccatctgttg	cttctgtttg	taatctcagc	120
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gtgcactgtg	atgtcagcaa	agaagaagac	gtgagcgcgg	ctgtggatct	ggctatggat	360
aagtatggtc	aactcgacat	tatgtataac	aacgctggaa	ctaacgacag	ctttctgggt	420
aagagcgtgg	cagagtatga	tatggagcaa	ttcgatcgag	tgatgaacgt	aaacgtgaaa	465

g

<210> 1670  
 <211> 445  
 <212> DNA  
 <213> Pinus radiata

<400> 1670						60
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gtaaatcccc	atccccaaaa	gggcgtcgcc	tcgtggctgg	tggacatgg	ggagaaactg	240
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agttgcttgg	atggagagtt	cgtgcgcgtt	ggtcccaatc	cgaaattcgc	accggtagct	420
ggctatcact	ggtttgatgg	agatggaatg	atccatgggtc	tcagaattaa	agatggtaaa	465
gccacatatg	tgtcacgtta	tgtga				

<210> 1671  
 <211> 460  
 <212> DNA  
 <213> Pinus radiata

<400> 1671						60
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tcgggtttgc	tggtcatctg	ggagaggcga	tccattcagc	ttcgaggcc	cccgaagatg	180
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caattgacag	ctgataatc	tgtttttcac	aaatcctgtt	tcgctgccca	tactgcaat	300
ggaactttta	agcttagcaa	ctattcgtcg	tttgagggag	ttctatattg	caaactcat	360
tttgaccagc	tgtttaagag	aacaggaagt	ttggataaaa	gttttgaaagc	cattcctaga	420
gcatcaagaa	atgacaagat	gcatgagaat	gagaacagga	cacctagtag	ggtatcagca	460
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<210> 1672  
 <211> 301  
 <212> DNA  
 <213> Pinus radiata

<400> 1672  
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 actcttttaa gaaactctca aaatcagcct taaacaataa catacaagat gtccatttcta 180  
 ccccaaagcg attccctcat aataagggaa gtttgggcag ataactctga ggaggagttt 240  
 gctttgattc gggaaattgt ggacgattac ccttatattg ctatggatac tgagtttcct 300  
 g 301

<210> 1673  
 <211> 321  
 <212> DNA  
 <213> Pinus radiata

<400> 1673  
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 aagatggcag caagggttac aaggccgtaa atccccatcc caaaaagggc gtcgcctcgt 120  
 ggctgggtgga catggtggag aaactggtgg ttgaaacttc tgcgttgat agttcgaaga 180  
 agcctctgca ttttcttttg gggaacttcg ctccagtcct ggaaactgcc cccaaatcgc 240  
 acctgcctgt tggtgggcaa cttcctagtt gcttggatgg agagtctgt cgcgttggtc 300  
 ccaatccgaa attcgcaccg g 321

<210> 1674  
 <211> 380  
 <212> DNA  
 <213> Pinus radiata

<400> 1674  
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 ttctgcagat gtagaaactc ttcttcctca gggttgatgaa acagcttctg ctgatctgac 180  
 agtgttccca gggttttgta ccccttatgt accatacggg ttccccatat ggcacacttt 240  
 tagaccaca ataactcaaa cttccaatgt ttataagcca acagctgtaa tgccaactgc 300  
 tccaataaaa atggacgaat gcacagggtt atcccagtta agcctcggcg gtgttgacgc 360  
 ggcttctgca atgaaacct 380

<210> 1675  
 <211> 350  
 <212> DNA  
 <213> Pinus radiata

<400> 1675  
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 caggaaccag gttgcataat ggctaggcct caaagatata gaggagtccg tcagaggcac 180  
 tggggatcat gggctctctga aatccgccat cccttattga agaccagaat atggctagga 240  
 acatttgaaa cagcagagga tgcagcacga gcatatgat aagctgcaag gatgatgtgt 300  
 gggccgagag ctagaaccaa cttcccattc aatcccatgc acctccatct 350

<210> 1676  
 <211> 262  
 <212> DNA  
 <213> Pinus radiata

<400> 1676  
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aagataaaat	actggctcgac	tacattacca	aacatggcca	tggcaactgg	cgtgcactgc	180
ccaagcaagc	agggctcctg	cgatgtggaa	agaagttgtc	gcctgcgggg	gacgaattac	240
ctgaaacccg	acatcaaaag	ag				262

<210> 1677  
 <211> 357  
 <212> DNA  
 <213> Pinus radiata

<400> 1677						
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catatgggtt	ggatccttcc	aaacggcaga	gatggcgggt	cgagcttacg	acgtggctgc	180
gctcagcctg	aagggaagat	ctgctttgcc	caatttcccg	gattccgtcc	acacgctgcc	240
gcgcccctct	tctctgaatc	ccagagatat	ccagcttggc	ggctgcccag	gcagccgcga	300
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<210> 1678  
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 <212> DNA  
 <213> Pinus radiata

<400> 1678						
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tgtgattgtt	atgcgggatc	gtgcaactgg	tcgttctcgt	ggatttgggt	atgccacatt	180
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actggaagta	aagggtggta	cacccaagga	ggagatgaag	gctccttcta	agaagattac	300
ccggatatatt	gnggcaaaga	attccccctt	ctgttacaga	ggatgcattc	cgaa	354

<210> 1679  
 <211> 174  
 <212> DNA  
 <213> Pinus radiata

<400> 1679						
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tgattctctc	cgaatacgtt	cgaattcatg	gcgatgggtg	atggaaaaat	gttg	174

<210> 1680  
 <211> 221  
 <212> DNA  
 <213> Pinus radiata

<400> 1680						
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agaagatgtg	agcgcggcgg	tgatgtggc	catggataag	tatggccaac	tgacattat	180
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<210> 1681  
 <211> 363  
 <212> DNA  
 <213> Pinus radiata

<400> 1681						
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ggtcagattt	gataggaatg	gccctgctgc	aatcaccaaa	tatcaagcag	aacatgcaac	300
acctggagca	aatgagagta	acatgggtgt	ggctcctacc	cctcatactc	ttcaggaact	360
tca						363

&lt;210&gt; 1682

&lt;211&gt; 374

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1682

ctgatttgaa	gtgctcattc	atgaacaatc	cgagcagcag	ttatgcataa	aatgttgatt	60
gcagggtctc	gttattgcca	gcaactaaag	ggcgatgggt	ttacaatcaa	atatcgagaa	120
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gagcattctc	atcacctaga	gcctcagcag	atgaagaagc	tgctgcaaaa	gcagctgctg	240
ctgtagcaga	gacaggagcc	ccaaccatat	ttgacaagat	cataaagaag	gaaattccag	300
caactattgt	ttatgaggat	gcaaaagtgt	tggcatttcg	agatattaat	ccacaggcac	360
cagtccatat	attg					374

&lt;210&gt; 1683

&lt;211&gt; 407

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1683

gccgtggctg	ttcccaggag	aggagagcct	cagctgtctc	gatctggcct	taaggggtta	60
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tgggatttgg	accctatgg	aggatatgat	tctctctgaa	tacattcgaa	ttcatggcag	180
tgatggatgg	aaaaatatcg	ctaaacgagc	aggtaaaatt	ctaatagcaa	tttttattgc	240
aaacgtaata	ctcattgaga	ggttaactaa	gcgggcagtt	tttgttctgc	aggctctaaa	300
cgacgtggaa	aggggttcag	attacgttgg	ttgaactatc	ttcgccccga	cattaaacgt	360
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&lt;210&gt; 1684

&lt;211&gt; 361

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1684

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aagcgtggaa	gcttcacgga	agaagaagac	gaaactcatca	tcaaactcca	ctccttcggt	300
ggcaacaagt	ggtctttaat	tgcaggggaga	ttgcccggac	ggacggacaa	cgagataaag	360
a						361

&lt;210&gt; 1685

&lt;211&gt; 340

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1685

caagagtaaa	cccgaaggaa	tagaagggga	aggaggcatc	ggcagcggtg	ttcctcctcc	60
tctcctctcc	tgcatctctc	aaactcaaat	acctctcctc	tcacaatcat	ggaaggcgga	120
gtcgtctttg	aatctgtgca	aaacccactg	gatcgccctga	acactggaaa	tatggaccat	180
ggttgtgccc	attacaggag	acgatgtcgg	attcgggccc	cttggttgcaa	tgagatctat	240
gattgtaggc	actgtcacia	tgaagccatg	agccatctaa	aggacccctt	gctgcgccat	300
gagctcccaa	aatacaaagt	tgaacgggtt	atttgggtctc			340

&lt;210&gt; 1686

<211> 332  
 <212> DNA  
 <213> Pinus radiata

<400> 1686  
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 aagaagaaaa tacaagatgg gcagatctcc ttgctgctca aaagaagggc tcaaccgtgg 120  
 ggcctggacc aaaaggaggg atatgattct ctccgaatac attcgaattc atggcgatgg 180  
 cggatggaga aatatgcccc aaagagcagg tcttaaacgg tgtggaaaga gctgcagatt 240  
 acgatggctg aactatcttc gccccgacat taaacgtgga aacatttccc ctgatgagga 300  
 ggaactcata attcggctcc atcgcttct tg 332

<210> 1687  
 <211> 347  
 <212> DNA  
 <213> Pinus radiata

<400> 1687  
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 ctgtggcgga agatggcagc aagggttaca aggcgtaaa tccccatccc aaaaaggcg 120  
 tcgctcgtg gctgggtggac atgggtggaga aactgggtgt tgaaacttct gcgttgata 180  
 gttcgaagaa gcctctgcat tttcttttgg ggaacttcgc tccagtctcg gaaactgccc 240  
 ccaaactgca cctgcctgtt gttgggcaac ttcctagtgt cttggatgga gagttcgtgc 300  
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<210> 1688  
 <211> 354  
 <212> DNA  
 <213> Pinus radiata

<400> 1688  
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 atacgaatgc ccctctggtc gtgtgatgct gcgggacatg cgcaggcatt gatgctgcag 180  
 tttctacacc accttgactt tttagattat ctgattttga caaatctatt ttgaatttgg 240  
 aagttctttt tctgagtagt tagatcagta gacctgtcgt atcagttatt atacagtttt 300  
 cttatactag tcctttactt caagactggc tgatatactt ctattttcat atga 354

<210> 1689  
 <211> 348  
 <212> DNA  
 <213> Pinus radiata

<400> 1689  
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 gatatcatgg aaagtataaa gaaatgcaag aattcgaaaa tgcgatgctc agtggttgga 180  
 ttatctgcag aaattttatat ttgcaaacac ctctgtgagg agacgggagg attctattcc 240  
 gtggcacttg atgagtcaca tttcaaggac ctctctgttg aacattgccc tccaccacca 300  
 gccatagcag agtttgtagt tgctagcttg gtcaagatgg gatttcct 348

<210> 1690  
 <211> 349  
 <212> DNA  
 <213> Pinus radiata

<400> 1690  
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 aagttgttct atttcgatct caaggaaaac ccccgaggtc aataccttaa aatctctgag 180  
 aagacctccg gctcacggtc tacaataatt gtgccattg gtggagtgtc atggttctct 240

gatctcttta attattatgt cgacggagat gacgaggaag ttttgagcaa ggaattgcag 300  
ctggatgccca aggtatttta tttcgatggt ggggtgaata aaaggggtc 349

<210> 1691  
<211> 339  
<212> DNA  
<213> Pinus radiata

<400> 1691  
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cgcgagactg tagaatttta ggggtgtttt ccacaaaccg acttttcccg acttcaaatac 120  
ttgatattga agtgacatgg ccggcgagaa aagaaagatt aatagaatag ctaacgcttc 180  
ggccaggcag gtcaccttcg cgaagaggcg gagggggctg ttcaaaaaag ctcaggagct 240  
atcgatttta tgcgaagccg atgtagccct cctcgttttt tcttcaactg gaaagctgta 300  
ccagtactcc agctccagca tgaaaatgat attggacca 339

<210> 1692  
<211> 380  
<212> DNA  
<213> Pinus radiata

<400> 1692  
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gctggcatcg taatgatgat gatgagccag ttaaattctga tgaggtttgg atcaataatc 180  
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caccttgagt atatgcttgg agggagaagt gatctaactg taattgccaa ggcaaaacac 300  
tgagtgtgag ctcattgcag gcaatgaatt tatggttcag tgtttagttg tatggaagta 360  
tattattcat tagacatgca 380

<210> 1693  
<211> 442  
<212> DNA  
<213> Pinus radiata

<400> 1693  
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atacgattct caccgagtac attcgagttc atggcagtg tggctggaaa gatattctcca 180  
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atcgcttctc tggaatcgg tggctctctga tagcaggacg actgcctggg cgaacagaca 360  
acgaaatcaa gaattactgg aacactcata tgagcaagaa gccatggctg tcaatggacg 420  
aatctcagtc caatacttcg ca 442

<210> 1694  
<211> 351  
<212> DNA  
<213> Pinus radiata

<400> 1694  
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cacaaatagg aagttaagaa taaagcgaac aataaaaagt ccagccatta gcagtaaatt 180  
ggcagatata cctcccgatg attattcgtg gaggaagtat ggacaaaagc caatcaaggg 240  
ctccccacat ccaaggggct attataagt cagcagcatg agaggttgct ctgcccggaa 300  
acatgtggag cgggtgtccag atgaaccttc catgcttatt gtgacttatg a 351

<210> 1695  
<211> 304  
<212> DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1695

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acttcctagt	tgcttggatg	gagagtctgt	gcgcgttggt	ccaatccga	aattcgcacc	240
ggtagctggc	tatcactggg	ttgatggaga	tggaatgata	catggtctca	gaattaaaga	300
tggt						304

&lt;210&gt; 1696

&lt;211&gt; 371

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1696

gcgtggatgt	acaacgaata	tggatccata	gaggtcctgc	actttgggga	tttccctggt	60
ccaaagcctg	ggttaggcca	gctcttaatt	cgagtcgggg	ccgctgctct	taatcctgcc	120
gactttaaga	gacggaaagg	cttattaaga	aacgcggatt	ccgattttcc	gactgtgcca	180
ggctgtgata	tgtcaggagt	ggtgggtggaa	attgggtgatg	gtgtctccaa	gttcaaggcc	240
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actctcgccc	agtacacagt	ggtggaggaa	ttcctggtag	cgccgaagcc	cagtaattta	360
tcatttgagg	a					371

&lt;210&gt; 1697

&lt;211&gt; 523

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1697

ccttcattga	tatgttggag	ttgattcgcc	accatttgct	ggaagtggag	gacaatatag	60
atatagatat	tgatattgag	ggaacttcgc	cggtgttctt	cacccccact	gccattgaga	120
gtggcgatta	tattaatatt	gatgatcatg	acgatgatac	ccgagcaaat	gccagagcga	180
ccagggcctc	atgccaaaat	atcgtcagca	gaacaacatt	aaaagagaac	gcgaatgaat	240
ttacacaaca	gatccattct	tcatcttctc	caagatgctc	agttatgaaa	ggagcagagg	300
cgtttcagg	aaagcaacaa	ccacgggagc	gggagaatgg	aaagaagaga	gagacaagtg	360
ccagggaatt	caagaggagt	aggcggcgcc	cggtggggaaa	attcacagca	gaaatcagag	420
attccgcgcg	gaagggtgct	cggttttggc	ttggaaacttt	caacaccgtc	gaagaggctg	480
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&lt;210&gt; 1698

&lt;211&gt; 471

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1698

cgcgatagcc	gagagcaccc	ttatctcctc	cactctgttt	catacatgca	acaagctctg	60
gcagcagcaa	tgggggccca	gactatcatc	gctgcctcta	tgcatctctc	tctaacatta	120
tcaaatggcc	actatccgtt	tcagtccgag	ttcaaggggt	ccgtgggttcg	aatcccgag	180
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tttcatctac	atgagtttgg	tgacacaacc	aatggctgca	tatcaacagg	agcacatttt	420
aatccaaaaa	aattgacaca	tggtgctcct	gaggatgatg	tacgccatgc	g	471

&lt;210&gt; 1699

&lt;211&gt; 483

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1699

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gtcatattcc	atgtttccca	attcaggaat	gggtttaa	ccctcagtga	catcttcaga	180
accctctagt	caggtctccg	gatcgatccc	ccatcaatat	tcaggctccg	aggaagaccc	240
taaactgacg	atcgatgaaa	gaaagcagaa	gagaatgctt	tctaacagag	aatctgcaag	300
gaggtccagg	atgagaaagc	aacagcattt	ggatgaattg	agagccgaag	cagctcatct	360
cagagcagag	aacagtcata	tgctaacaaa	attcaacatt	gcttcacaga	aatacatgca	420
gctggaagaa	gagaattctc	ttctgaggtc	ctatgccatg	gatttaagcc	tcaagctgca	480
gtc						483

&lt;210&gt; 1700

&lt;211&gt; 442

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1700

ttttttttga	atagaaaaaa	tataattagg	tacttttctt	tagaatgttg	cagataattg	60
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gatcttgaca	aacctaacca	atcacttata	cctactgtca	agtaaataatg	taacaaatat	180
caatttttcaa	tcaaagggtg	cattaagagt	tttaaccaac	aagggtgaagg	caatgaatct	240
ctagatctca	ctaaccta	tctgctctac	ctaccaagct	agcagtctgg	cttgaaatta	300
gcagaacttc	caatgggttat	tacaatttac	acatgtcaca	aatgtagtca	taggttcac	360
tgactttctt	gtttgcaact	gatagtaagt	acacttccgc	tggccacatt	taccacactt	420
gaattgggtct	gttgtagctt	ta				442

&lt;210&gt; 1701

&lt;211&gt; 316

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1701

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tgactgttg	ctatgcttgc	gagggatcaa	aacaatggct	ttgcgcattg	agaaacaaca	180
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&lt;210&gt; 1702

&lt;211&gt; 329

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1702

ataatgtcat	attttatata	cagagacttg	aactatttgt	atggtgta	tcatattggt	60
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aacaggcggg	tggggctgac	gggctttaag	tggcgctgtg	gtgacctttt	ctgcgctcag	300
cacagggtact	ctgatatgca	tgactgctc				329

&lt;210&gt; 1703

&lt;211&gt; 325

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1703

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 atatgcttgc cctacaaggc ttata 325

<210> 1704  
 <211> 453  
 <212> DNA  
 <213> Pinus radiata

<400> 1704  
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 tgaccaatgt tggagatcga cgattggagg ggaagggtgc aatagtaacg ggcggggcag 180  
 cgggcatagg agaagccatt gttcagttgt tcattaagca tggagccaaa gtcataatcg 240  
 ccgacgttgc ggagaaagct ggcagaaagc ttgagcaatc cctttcaccc gctgtggcaa 300  
 cttacgtgca ctgcgatgtg agcaaagaag aggatgtaag cgcagcagtg gatgtggcca 360  
 tcgacaagta tgggtcaactg gacattatgt ataacaacgc tggaaactaac gacagcgttt 420  
 tgggtgaagag cgtagcagag tatgatatgg agt 453

<210> 1705  
 <211> 242  
 <212> DNA  
 <213> Pinus radiata

<400> 1705  
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 ccagataaga ttttctttac tccaaaagct gtcatacaaac tggattttca ctgtcctgaa 120  
 tcaaactgtt caccagaagc agtacttcta acttgtatatt ttactgcatt attggtggat 180  
 tattttaaatg aatacgggtga ctataagtgg atacagtcatt aagatgagaa ttttactgga 240  
 ga 242

<210> 1706  
 <211> 358  
 <212> DNA  
 <213> Pinus radiata

<400> 1706  
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 aattcaaggc cgacgaacgt gaggtgctag ggcttttaga gtttggatgg aacctcatga 180  
 catcgttggc aagtccaagg atgacgtctc gcttcccaaa gcaacctatg taaaattat 240  
 aaaagagatg ctgcctccag atgttcgtgt tgcaagagat gctcaggact tactggctga 300  
 gtgttgtgtg gagtttatca atctaataatc ttcagaatcc aatgaagttt gtggcaga 358

<210> 1707  
 <211> 334  
 <212> DNA  
 <213> Pinus radiata

<400> 1707  
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 cagcaggtcg aaggtctaga gagcttttat gctgaacata agtatccttc ggaagctatg 240  
 aaatcacagt tatcagaaga actgggatta acagagaagc aggtacaagg atggttctgt 300  
 cacaggaggc ttaaggataa aaggctcatg aagg 334

<210> 1708  
 <211> 288  
 <212> DNA  
 <213> Pinus radiata

<400> 1708  
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 cctgaacact ggaatatgg accatggttg tgccattac aggagacgat gtcggattcg 180  
 ggccccttgt tgcaatgaga tctatgattg taggcactgt cacaatgaag ccatgagcca 240  
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<210> 1709  
 <211> 406  
 <212> DNA  
 <213> Pinus radiata

<400> 1709  
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 gttcggttctg gcaggagtta tctcagggtt tttctcttgc tttctctgcgc cttcggactc 180  
 gggcttacag ttacagcatc tggaaaatgg cgtcacagga gagctcaaaa atgcaagagg 240  
 aaggagtgag gagacaagtg ccggaagggc ccattcactg tttgaacaac tgcggcttct 300  
 tcgggagcgc ggccaccatg aacttgtgct ccaagtgcta cagagagctt aacgccaac 360  
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<210> 1710  
 <211> 434  
 <212> DNA  
 <213> Pinus radiata

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 cgcctccgag catcacttaa tgccagagat gtacctcttg aggaattgac cttagattcg 180  
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 ctatttgctt ctgagatgct tcttagggga ccgtgccttg aaccttccgt gttttctcaa 360  
 ataagttctc aaattcagtc acataaggca gctcaagttc agcctcaggt gcaaacatca 420  
 attagtaatc agat 434

<210> 1711  
 <211> 387  
 <212> DNA  
 <213> Pinus radiata

<400> 1711  
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 ggtcgcttag tgactcttct aggggggacgt gctgcagagg aagtggtata ctgaggtcgt 120  
 gtttccactg gtgcacttga tgatataaag cgtgcaacag atatggcata caaagctgtc 180  
 gctgaatatg gtcttaacaa gtccataggt ccaatttcat tggcgacttt gtctggtggc 240  
 ggtcttgatg agtctggagg agcaatgcc tgggccaagg atcaggagca tatggttagac 300  
 cttgttcaaa gagaggtgaa aattttgcta caatcggtt tgacaatggc actccttgct 360  
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<210> 1712  
 <211> 440  
 <212> DNA  
 <213> Pinus radiata

<400> 1712  
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 cagcgggcat aggagaagcc attgttcagt tgttcattaa gcatggagcc aaagtcataa 240  
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caacttacgt	gcactgcat	gtgagcaaag	aagaagatgt	aagcgcagca	gtggatgtgg	360
ccatcgaaaa	gtatgggtcaa	ctggacatta	tgtataacaa	cgctgggaact	aacgacagct	420
ttttggtgaa	gagcgtagaa					440

<210> 1713  
 <211> 446  
 <212> DNA  
 <213> Pinus radiata

<400> 1713						
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aagaagaaaa	tacaagatgg	gcagatctcc	ttgctgctca	aaagaagggc	tcaaccgtgg	120
ggcctggacc	aaaagggagg	atatgattct	ctccgaatac	attcgaattc	atggcgatgg	180
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ggaactcata	attcggctcc	ntcgcttct	tggcaatcga	tggtcgctta	tagcaggaag	360
attaccaggt	cgaacagaca	acgaaatcaa	gaactactgg	aacactcata	tgagcaagaa	420
gctgcttcca	ttgaacgaat	ctcaac				446

<210> 1714  
 <211> 519  
 <212> DNA  
 <213> Pinus radiata

<400> 1714						
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gctactgtca	gctatatgat	ggacctgtgt	tttcatcact	ggctcacttc	acctgtttga	180
gtatctgcca	tttttggtatg	tttgtgtaag	cttgggctaaa	taccagagac	acaaagaaac	240
cgctctgtag	ccggagttat	cgaaactatt	tacaatgcca	cgggtgaaat	ttatttccag	300
gaacttcatg	gacatgggtg	cagcattacc	ggctgcaaag	ttagatcggc	tttatgatag	360
tcatttcaatt	tgcgaagcgg	ttctgaggtc	tctgactcct	gtgccaaaaga	aatatgtatt	420
gcaactatta	tatatgtacg	ttgcgggtgcc	tgccaaatca	ctggaggaat	gggttctttc	480
agatggcctg	tctaagcaca	aagcagcaat	tgataggtt			519

<210> 1715  
 <211> 162  
 <212> DNA  
 <213> Pinus radiata

<400> 1715						
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gtgacagaag	caagggagcc	tggaccaagg	aagaggatga	caggcttacc	caatatattc	120
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<210> 1716  
 <211> 481  
 <212> DNA  
 <213> Pinus radiata

<400> 1716						
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cgcgggcgaa	ggttcggacc	ctgtgggtgg	ggatgaattga	ctgtaagagg	ccgccgatct	180
cgatcgaagg	tgtacagaga	tcattaatgg	cgatgcccga	gccgttgctt	gtgaattgct	240
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gtcaagcggg	cactcatgta	gcggaacatc	acggcgatat	tccgcctcga	ggttaccgcc	360
accagcagcc	attggctcct	cccgcgggtca	gtccccagca	ctattcgccc	gctccgcctt	420
cttcccacgg	caggaagaag	gcggtcgtct	gcggcatttc	ttacagatat	tcccagcacg	480
a						481

<210> 1717  
 <211> 546  
 <212> DNA  
 <213> Pinus radiata

<400> 1717  
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 ctgcactgtt tgcgggggata tgattccaaa aagtcgttct atggaacacc accaggatac 120  
 ccatgctcct gtatcttggt cacagtgtgg cgaatccatt gaacgtgaat tactagtcac 180  
 ccatgagcgt gacaagtgtc ttcatagaat tgttacatgt gggtattgag agtttccact 240  
 gccagctgtt gatcttgata aacatctgaa catctgtggg aatagaacag agtattgtaa 300  
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 aggaaattct gatgacactg gggattcttc aagagagcag cacggggaaa ataatacacag 420  
 ctcaccagca gcagaactgt ctcggagagt tcctagggaa cggccacgag atacctcgca 480  
 gcgtcgttgg cttgtcacat tagcaatcac aggaattgcc ataattatag gatcatttgt 540  
 tcttca 546

<210> 1718  
 <211> 631  
 <212> DNA  
 <213> Pinus radiata

<400> 1718  
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 ctgctgtgaa aaagctcata caaacaagg ggctgggacc aaagaagagg acgatcgcct 180  
 catcgccac attcgaactc acggcgaagg ttgctggcgc tcgcttccca aggccgcagg 240  
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 gaagcgtgga aacttctcag aagaagaaga cgaactcgct atcaaactcc actccctact 360  
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 gaactactgg aatactcaca tcaagagaaa attgctaaac aggggactcg acccccagtc 480  
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 atacgagcgc tctgaaagct cgccgatgga a 631

<210> 1719  
 <211> 561  
 <212> DNA  
 <213> Pinus radiata

<400> 1719  
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 cctccttcca tctccagcgt ccgatctgat cttatcaaag gaagccctta aatccctcca 120  
 gctttccaag cgcgggttct gttgctgtat ccaggtccc tggatcatat gcggaagctg 180  
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 gggagcagga caggttccta cccatcgcca acattagccg catcatgaag aaggcgtgc 300  
 cggccaacgg caagatcgct aaagacgcca aggagaccgt gcaggagtgt gtctcggaat 360  
 ttatcagctt catcaccagc gaggccagtg acaaatgcc aagagaaaag aggaagacaa 420  
 tcaacggcga tgacttgctc tgggccatga gcacgctagg gtttgaagat tatatcgagc 480  
 ccttgaaggt ttacttgctc atgtacagag aggcggaggg tgacaataag ggatcttcaa 540  
 aatctggagt agaccaatat g 561

<210> 1720  
 <211> 497  
 <212> DNA  
 <213> Pinus radiata

<400> 1720  
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 aatttcgctg cccaatcgaa ccatggagtc taaggacag gctaataccat ctgttgcttc 120  
 tgtttgtaat ctcagcaaga atggagagcg acgattggaa gggaaagttg ttatagtaac 180

gggcggggca	gcgggcatag	gagaagccat	tgttcagctg	ttcgcaaagc	acggagcgaa	240
agtcataatc	gcagacgttg	cagagaaagc	tggcagaaag	cttgcagaat	ccctttctcc	300
agcatcggca	acttatgtgc	actgtgatgt	cagcaaagaa	gaagacgtga	gcgcggctgt	360
ggatctggct	atggataagt	atggccaact	cgacattatg	tataacaacg	ctggaactaa	420
cgacagcttt	ctggtgaaga	gcgtggcaga	gtatgatatg	gagcaattcg	atcgagtgat	480
gaacgtaaac	gtgaaag					497

<210> 1721  
 <211> 394  
 <212> DNA  
 <213> Pinus radiata

<400> 1721						
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agaaagtgtg	caacaatttg	ctgtctttat	gttgtctcaa	gtcgatcttt	ccagagaagc	120
tgacacttgg	aaccgctttc	tttacaattt	tcgcaggtgg	aaagatgtgt	catttcctaa	180
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cactggcacg	catactctcc	tcaagatgct	actgggtggat	aatttcattcc	atgcagatat	360
gcatcctgga	aatatatttg	ttcgaatggg	acaa			394

<210> 1722  
 <211> 394  
 <212> DNA  
 <213> Pinus radiata

<400> 1722						
taaggctaag	cagaccagag	gaggtgaagg	agaaaaaaga	aacaatggct	ggaataggac	60
cgattagtca	ggattgggaa	cccgttgtca	tcaggaagaa	ggctcctaac	gctgcagcca	120
agaaggacga	gaaggctgtc	aatgctgccc	gtcgaactgg	aggccctatt	gaaactatca	180
agaaatttaa	tcgaggatca	aacaaagcag	cctcgagcag	caccaccttg	aacaccaaga	240
agcttgatga	tgagacagaa	gttctcgctc	atgaaagagt	ttcatcagat	ttgaagaaaa	300
acataatgca	agcccgttta	gataaaaagt	tgacacaagc	ccagcttgca	cagcaaatca	360
atgaaaaacc	tcagattatt	caagagtacg	agtc			394

<210> 1723  
 <211> 317  
 <212> DNA  
 <213> Pinus radiata

<400> 1723						
gattcttctt	cttctgctcg	gggtctctct	ggtgaaatcg	tccccgcagg	aggagggctg	60
agggcagggc	tcggctcggc	tcggttcggt	tcggcaggag	ttatctcagg	gtttttctct	120
tgcttttctg	cgcttctgga	ctcgggctta	cagttacagc	atctggaaaa	tggcgtcaca	180
ggagagctca	aaaatgcaag	aggaaggagg	tgggagacaa	gtgccggaag	ggccatttca	240
ctggttgaac	aactgcggct	tcttcgggag	cgcgggccacc	atgaacttgt	gctccaagtg	300
ctacagagag	cttaacg					317

<210> 1724  
 <211> 265  
 <212> DNA  
 <213> Pinus radiata

<400> 1724						
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tctccctgct	gtgaaaaagc	tcatacaaac	aaaggggcgt	ggaccaaaga	agaggacgat	120
cgctcatcgc	cccacattcg	aactcacggc	gaagggtgct	ggcgctcgct	tcccagggcc	180
gcagggctga	tgcgctgcgg	gaagagctgc	aggctccgat	ggataaacta	cctgcgtcct	240
gatctgaagc	gtggaaactt	ctcag				265

<210> 1725

<211> 284  
 <212> DNA  
 <213> Pinus radiata

<400> 1725  
 caagagtaaa cccgaaggaa tagaagggga aggagggcatc ggcagcggtg ttctctctcc 60  
 tctctctctc tgcatttctc aaactcaa atctctctc tcacaatcat ggaaggcgga 120  
 gtcgtctttg aatctgtgca aaacccactg gatcgctga acactggaaa tatggaccat 180  
 gggtgtgccc attacaggag acgatgtcgg attcggggccc cttgttgcaa tgagatctat 240  
 gattgtaggc actgtcacia tgaaaccatg agccatctaa agga 284

<210> 1726  
 <211> 308  
 <212> DNA  
 <213> Pinus radiata

<400> 1726  
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 cagggcacca tgggcccagc tccttgctgt gataaaatgg gagtaaagaa agggccctgg 120  
 actctagacg aagataaaaat actggctcgac tacattacca aacatggcca tggcaactgg 180  
 cgtgcactgc ccaagcaagc agggctcctg cgatgtggaa agagttgtcg cctgcgggtg 240  
 acgaattacc tgaaaccgca catcaaaaaga ggaatttta gtccagaaga ggaagatcaa 300  
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<210> 1727  
 <211> 338  
 <212> DNA  
 <213> Pinus radiata

<400> 1727  
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 gtgagcaaa aagaagatgt gaccgcggcg gtggatgtgg ccatggataa gtatggccaa 180  
 ctggacatta tgtataacaa cgctggaact aatgacagct ttttggtgaa gagcgtggta 240  
 gagtatgata tggagcaatt cgatcgagtg atgaatgtaa acgtgaaagg agtgatgcac 300  
 ggcattaagc accccgcccg cgttatgatc ccgcggaa 338

<210> 1728  
 <211> 350  
 <212> DNA  
 <213> Pinus radiata

<400> 1728  
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 aacaccatct accaaggtt ttgtatttga atctatctca aacccaactc tggcagttgc 120  
 agacatccca tctctgtctg ccattgctca tgagaaaaat gtcaagggtg tgggttgataa 180  
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 catttcaaaa tatatcagtg gaggtgctga tggtatagca ggagcaatat gtgggacctgc 300  
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<210> 1729  
 <211> 333  
 <212> DNA  
 <213> Pinus radiata

<400> 1729  
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 gatataattca aactcatggg gaaggcaatt ggaggtctct gcccaagaaa gcagggtctgc 180  
 gaagatgtgg aaagagctgc agattgcgtt ggctaaacta tcttcggcca tgtatcaagc 240  
 ggggaaatat tacaacagat gaagaagaac ttattatcag aatgcatgct ctcttgggca 300

accgatgggtc gataatagca gggagagtcc ccg

333

&lt;210&gt; 1730

&lt;211&gt; 508

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1730

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&lt;210&gt; 1731

&lt;211&gt; 411

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1731

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&lt;210&gt; 1732

&lt;211&gt; 390

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1732

cgaaactcga	atcgatatgc	tttgtggccg	gttcaaatat	ttgagctggc	ttagcttctc	60
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&lt;210&gt; 1733

&lt;211&gt; 277

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1733

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caaggcccca	gtggattcta	ctcaggtgca	caggtttt			277

&lt;210&gt; 1734

&lt;211&gt; 221

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1734

gttgcagggg	aggggtgccc	tgatcacagg	aggcgccagt	ggaatcggag	aggctaccgc	60
caagttgttc	gtggagaatg	gagcgaaagt	agtgattgca	gaccttcagg	acgaccatgg	120
aaaccgtctt	gctcaatccc	tcgctcccaa	cgctgtcttt	ttccaactgcg	atgtctccaa	180
agaggcggac	gtttccgccc	tgctggactt	ggcgctggag	a		221

&lt;210&gt; 1735

&lt;211&gt; 316

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1735

tgggctgttc	ccaggagagg	agagcctcag	ctgtctcgat	ctggcggttaa	ggggttacag	60
aagaagaatt	tcgaagatgg	ttagatcttc	ttgctattca	aagcaaggtc	ataggcgtgg	120
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tggatggaaa	aatatcgcta	aacgagcagg	tcttaaaca	gttggaaga	gttgcagatt	240
accgttggtt	gaactatctt	cgccccgaca	ttaaactgtg	taacatttct	cctgatgagg	300
aggacctcat	tattag					316

&lt;210&gt; 1736

&lt;211&gt; 464

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1736

cagcatcggt	gctcttccc	gcagacctag	taagccgact	actgtaaatt	tattctttta	60
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ctgcagatta	cgatggctga	actatcttcg	ccccgacatt	aaactgtgga	acatttcccc	300
tgatgaggag	gaactcataa	ttcggtctca	tcgcttctct	ggcaatcgat	ggctcgcttat	360
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&lt;210&gt; 1737

&lt;211&gt; 361

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1737

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gagccatcta	aaggaccctt	tgctgcgcca	tgagctccca	agatacaaa	ttgaacgggt	300
tatttgttct	ctctgtgaca	ctgagcaaaa	tgtcaagcaa	gtttgcgaaa	actgtggtgt	360
t						361

&lt;210&gt; 1738

&lt;211&gt; 371

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1738

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ctcgaaatgc	agagtacaat	cccaagcgtt	ttgcagcagt	cataatgaga	ataagggagc	240
ccaaaactac	agcactgata	tttgcacatc	ggaagatggg	ttgcacaggt	gcaaaaagtg	300



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ctgctcattt c 371

<210> 1739  
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<212> DNA  
<213> Pinus radiata

<400> 1739  
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catgaaggct gtgggtatct gtggcagtgca cgtccactat ttgaggacat tacggtgtgc 180  
ggactttatt gtaaaagagc caatggtgat tggatcatgag tctgctggaa taattgagga 240  
ggttggcagt gaagtgaac atctggttcc tggtagccgc gtagctttgg agcctggaat 300  
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cagtgttggg gttcatgctt gtcgccgtgc ttctgtagge cctgagacaa atgtcttggt 540  
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<210> 1740  
<211> 473  
<212> DNA  
<213> Pinus radiata

<400> 1740  
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atcggcgcaa atttcaacgg cttataaact atttgggaag cagtactctg gatttttctc 180  
ccggaacgga tcggagtgtg ggaagcgtaa taatcgccctg gaatttgtct tctgcaagat 240  
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tggcactggc tgccaagctc cagaagggca cactctttgc gccataaact gcggcttttt 420  
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<210> 1741  
<211> 546  
<212> DNA  
<213> Pinus radiata

<400> 1741  
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tgagatcatt atttggtcag tttggagaac ttgtgcatgt caaaatacca gtgggaaaac 120  
gttgtggatt tgttcagttt aataacaggg cttctgcaga ggaagcattg caaatgctgc 180  
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aagtct 546

<210> 1742  
<211> 348  
<212> DNA  
<213> Pinus radiata

<400> 1742  
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ttggcaccgc tccatccagc tcggcagaac aggaggtgga gaaacatgaa caggacgagg 180

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atgactgctc	ttttgactac	aagactgccg	gccgcctcgc	cattctca		348

<210> 1743  
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 <212> DNA  
 <213> Pinus radiata

<400> 1743						
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nacaagtgat	cattcgggcc	agatttttgc	tgacagagtt	gtagtgtgtt	attgattcat	240
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<210> 1744  
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 <212> DNA  
 <213> Pinus radiata

<400> 1744						
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aagaagaaaa	tacaagatgg	gcagatctcc	ttgctgtctca	aaagaagggc	tcaaccgtgg	120
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cggatggaga	aatatgcccc	aaagagcagg	tcttaaaccg	tgtggaaaga	gctgcagatt	240
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<210> 1745  
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 <212> DNA  
 <213> Pinus radiata

<400> 1745						
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ctgaagctta	ccagaacaaa	atggtttgga	tcttatgcaa	tgatttgga	gtaacttctg	180
aagtaaattt	tcacattgtt	gcacacaagt	gtcaaagttg	caattcttat	aacacccggc	240
agaccagggg	aggtccttct	gcaagttcat	gtagatctca	tctttgatat	tctc	294

<210> 1746  
 <211> 316  
 <212> DNA  
 <213> Pinus radiata

<400> 1746						
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<210> 1747  
 <211> 263  
 <212> DNA  
 <213> Pinus radiata

<400> 1747						
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gatttggacc	cctatggagg	atatgattct	ctctgaatac	attcgaattc	atggcagtga	180
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&lt;210&gt; 1748

&lt;211&gt; 145

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1748

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cgtgaacaca	gcaatcgaac	gatta				145

&lt;210&gt; 1749

&lt;211&gt; 206

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1749

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&lt;210&gt; 1750

&lt;211&gt; 263

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1750

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&lt;210&gt; 1751

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1751

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&lt;210&gt; 1752

&lt;211&gt; 316

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1752

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<212> DNA  
<213> Pinus radiata

<400> 1753  
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<211> 349  
<212> DNA  
<213> Pinus radiata

<400> 1754  
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<210> 1755  
<211> 289  
<212> DNA  
<213> Pinus radiata

<400> 1755  
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<210> 1756  
<211> 235  
<212> DNA  
<213> Pinus radiata

<400> 1756  
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gaatcagatg gcagttgccc tcggtggaag ggtggcagaa gaagttattt ttgggaaaga 180  
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<210> 1757  
<211> 457  
<212> DNA  
<213> Pinus radiata

<400> 1757  
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tctcttcacg caaaaagaac aatgtagagg aagcagtgga aaagatgaga gccaaaggga 180

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caattatcat	aatttcatca	gttgctgctt	acagacc			457

&lt;210&gt; 1758

&lt;211&gt; 345

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1758

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gtgcaacct	acgtaagtgg	tgaaggaccg	gcagctcgtg	aggggcacag	tgctgcactc	240
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&lt;210&gt; 1759

&lt;211&gt; 544

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1759

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&lt;210&gt; 1760

&lt;211&gt; 375

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1760

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&lt;210&gt; 1761

&lt;211&gt; 333

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1761

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333

&lt;210&gt; 1762

&lt;211&gt; 331

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1762

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&lt;210&gt; 1763

&lt;211&gt; 568

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1763

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&lt;210&gt; 1764

&lt;211&gt; 351

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1764

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&lt;210&gt; 1765

&lt;211&gt; 462

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1765

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caatcgatgg	tcgcttatag	caggaagatt	accaggtcga	acagacaacg	aaatcaagaa	360
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&lt;210&gt; 1766

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 tcttctgggt caaggaaaat tacatcaciaa gggattctaa tccccgtggg gttgttccgg 180  
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 agctctcgac gagcagagag accatgtact tcatcgcaga cagcgataag gagaaggagg 300  
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 attcgctgta aattggttgc aattaggggt tctaggggtt tcttttgaat tttgtgatgg 480  
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<210> 1767  
 <211> 354  
 <212> DNA  
 <213> Pinus radiata

<400> 1767  
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 cgccacatt cgaactcacg gcgaagggtg ctggcgctcg cttcccaagg ccgcaaggct 240  
 gatgcgctgc ggggaagagct gcaggctccg atggataaac tacctgcgtc ctgatctgaa 300  
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<210> 1768  
 <211> 430  
 <212> DNA  
 <213> Pinus radiata

<400> 1768  
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 aagcatggct ttcacttaca tgagtttggg gacacaacca atggctgcat atcaacagga 420  
 gcacatttta 430

<210> 1769  
 <211> 407  
 <212> DNA  
 <213> Pinus radiata

<400> 1769  
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<210> 1770  
 <211> 347  
 <212> DNA  
 <213> Pinus radiata

&lt;400&gt; 1770

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&lt;210&gt; 1771

&lt;211&gt; 469

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1771

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&lt;210&gt; 1772

&lt;211&gt; 461

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1772

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&lt;210&gt; 1773

&lt;211&gt; 332

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1773

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&lt;210&gt; 1774

&lt;211&gt; 322

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1774

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&lt;210&gt; 1775

&lt;211&gt; 428

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1775

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attgcaga						428

&lt;210&gt; 1776

&lt;211&gt; 512

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1776

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&lt;210&gt; 1777

&lt;211&gt; 498

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1777

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&lt;210&gt; 1778

&lt;211&gt; 435

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1778

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<210> 1780  
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 <212> DNA  
 <213> Pinus radiata

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<210> 1781  
 <211> 360  
 <212> DNA  
 <213> Pinus radiata

<400> 1781						
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<210> 1782  
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 <212> DNA  
 <213> Pinus radiata

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<210> 1784  
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 <212> DNA  
 <213> Pinus radiata

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 <212> DNA  
 <213> Pinus radiata

<400> 1785  
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 agaggcgag gtttcgccc tgctagactt ggcgtggag aagcacggac gtctcgacat 360  
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<210> 1786  
 <211> 435  
 <212> DNA  
 <213> Pinus radiata

<400> 1786  
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 tctggatcag cccctcgcca attggcccat cactccttta actaatcctg ctagtcttcg 180  
 ttattctggc ctcatcttct ccgcttctct tgcgccttct gcccctgttt cccccaaccc 240  
 tgcataccct gaccagcaga gcgttcgtga gaatttgccc gccgtcttcg actatgggag 300  
 tctcagtgtt gatcgccagg aggtggttgt ctgtattgtt tgtttcaatg agttcgtgtc 360  
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 taagtggatc gacta 435

<210> 1787  
 <211> 323  
 <212> DNA  
 <213> Pinus radiata

<400> 1787  
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 aaagcttgag gaatcacttt ctcccgtgtt ggcaacttac gtgcactgcg atgtgagcaa 120

agaaaaagat	gtgagcgcgg	cggcggatgt	ggccatggat	aagtatggcc	aactggacat	180
tatgtataac	aacgctggaa	ctaatacag	ctttttggtg	aagagcgtgg	tagagtatga	240
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<210> 1788  
 <211> 359  
 <212> DNA  
 <213> Pinus radiata

<400> 1788						
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 <212> DNA  
 <213> Pinus radiata

<400> 1789						
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ttgattggag	agaccttgag	cttcatgcga	gggattaatt	ccattttctaa	accacgcca	240
ttcattcaag	atcgagagca	aaggtatggg	aagatattca	gaacaaattt	gtttggaaga	300
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 <212> DNA  
 <213> Pinus radiata

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<210> 1791  
 <211> 315  
 <212> DNA  
 <213> Pinus radiata

<400> 1791						
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<210> 1792  
 <211> 376  
 <212> DNA  
 <213> Pinus radiata

&lt;400&gt; 1792

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&lt;210&gt; 1793

&lt;211&gt; 407

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1793

gggaattccc	attctgcaca	tgcaatggac	aatggaatga	tggtatggat	agtttttagca	60
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cacaatgttc	cttgggagac	tcttccaccg	ggggctgtgg	gatggccctt	tctcgagag	180
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tcacagataa	tcggagagt	caatatcttt	gctgctcgtg	gagactt		407

&lt;210&gt; 1794

&lt;211&gt; 532

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1794

cctgggtgcc	ttcgtcgctc	acttcacaat	caagttgaaa	gtgaaatcaa	tcgatctgaa	60
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cggcagatgt	tgcatgtgat	tcgccaccat	ttgctggaag	aggaagacga	aatggatggt	180
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acatcattat	cagaagagaa	tgagagtgc	caacctctt	ctgcttcttc	ttcttggtga	360
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caggaggagg	acagtcgaga	gaccatcaaa	gacaggcact	acagaggagt	gagggaagcgg	480
ccatggggta	aattcgcgagc	tgaaatcagg	gaccccgcca	cgaagggggc	ca	532

&lt;210&gt; 1795

&lt;211&gt; 502

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1795

tgcataccat	cattgtaatg	gaggtgaaag	gaataggagt	gggattctta	ttaagcaatg	60
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&lt;210&gt; 1796

&lt;211&gt; 476

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1796

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&lt;210&gt; 1797

&lt;211&gt; 509

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1797

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&lt;210&gt; 1798

&lt;211&gt; 247

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1798

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aagggaattc	acaggctcgag	ggtgttgatc	gtctctcgca	ggaagacagc	ggtcccacaa	240
cagtga						247

&lt;210&gt; 1799

&lt;211&gt; 147

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1799

tcattattct	tccgcctgtg	aaaagatggg	agatctccgt	gctgtgagaa	ggctcatact	60
aacaaagggg	cctggactaa	acaagaagat	gaccgcctta	tcgctcacat	tcgagccccg	120
gggaaagggg	ctggcggttct	cttccca				147

&lt;210&gt; 1800

&lt;211&gt; 361

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1800

cttcagtttg	cattgaagac	caataaataa	ttattgtgaa	gcagcagcgt	tttaatcaga	60
gatccagcaa	gaagaggacc	aggaaaaatc	atttgcagaa	caagaagata	atccaagatg	120
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<210> 1801  
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 <212> DNA  
 <213> Pinus radiata

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 ggacctcatt attaggttgc atggccttct tggcaatcga tggctcttga tagcaggac 359

<210> 1802  
 <211> 475  
 <212> DNA  
 <213> Pinus radiata

<400> 1802  
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 acaagtatgg tcaactggac attatgtata acaacgctgg aactaacgac agcgttttgg 420  
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<210> 1803  
 <211> 382  
 <212> DNA  
 <213> Pinus radiata

<400> 1803  
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 ttttagttca ccaaagggtg ctgacgagaa tgaagttaca tcagaaaaag tagccaaaac 240  
 tggttcaaaa attaatgcat taatagctct attgaaagag tcccaggatc atgatccaac 300  
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 gaaaagtcag gcttctagtt tg 382

<210> 1804  
 <211> 533  
 <212> DNA  
 <213> Pinus radiata

<400> 1804  
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 atcaagaaaa ctggaacatc ggagctgatg gcactggctg ccaagctcca gaagggcaca 180  
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 aatgttacag ggatctgatt atgaaggagg cccaagcctc atctgcaatg gccgccgttg 300  
 agaagtcatt tgccgcgggt tctccgatgg aggaggaggc ccctctttcc aagccagatg 360  
 ttttcgtcga acaaagccgt gcaccgatct ccccagccgt agtccaagcc tcgtcagttc 420  
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<210> 1805  
 <211> 549

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1805

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gcccagggtt	gtaactgcga	gcacattaga	atccccaaaa	agtacagaac	aggagaatag	120
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&lt;210&gt; 1806

&lt;211&gt; 397

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1806

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gcaaaagtta	ttgcaaagca	ggaagggtta	tctgatggct	tcagaattgt	cattaacgat	360
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&lt;210&gt; 1807

&lt;211&gt; 242

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1807

caagatgggc	agatcttctt	gctgctcaaa	agaagggctc	aaccgtgggg	cctggaccaaa	60
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tatgccccaa	agagcaggtc	ttaaacgggtg	tggaaagagc	tgagattac	gatggctgaa	180
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tc						242

&lt;210&gt; 1808

&lt;211&gt; 364

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1808

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gagctcccaa	gatacaaagt	tgaacggggt	atttgttctc	tctgtgacac	tgagcaaaaat	360
gtca						364

&lt;210&gt; 1809

&lt;211&gt; 265

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1809



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aaaaatcttt	actattcatt	tgacttggga	gttggtacatt	tcttgtatat	gtccactgaa	120
actaattttt	tagatggaag	tgatcaatat	gctttcatag	agcaagattt	gaaaaagggt	180
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<210> 1810  
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 <212> DNA  
 <213> Pinus radiata

<400> 1810						
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gtaagtcaga	gtgccatggc	cgtgcacact	atgcagatgg	cgagaatgga	aatgaagcgt	180
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<210> 1811  
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 <212> DNA  
 <213> Pinus radiata

<400> 1811						
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<210> 1812  
 <211> 185  
 <212> DNA  
 <213> Pinus radiata

<400> 1812						
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acccaacac	ctactcacat	cattatcatc	cccaaagtaa	gggatggctt	gactggccta	180
tctaa						185

<210> 1813  
 <211> 337  
 <212> DNA  
 <213> Pinus radiata

<400> 1813						
caataaatgg	ccgaatgaat	taatcaacga	tgaaatgaat	taatgaataa	gctattggat	60
ctaggaaggg	ttttgaggct	gaaagttttg	ggctctcatt	tgggagttac	attcaaccaa	120
gctcatcata	tggcgtccga	gaaggaagct	gctcttgctg	ccacaccacc	agaagatgat	180
aaacctacaa	tatttgacaa	aatactgcag	aaggagattc	ccagtacagt	ggtttacgag	240
gatgagaagg	tacttgcatc	cagggatatc	gcacccaac	acctactcac	atcattatca	300
tccccaaagt	aagggatggc	ttgactggcc	tatctaa			337

<210> 1814  
 <211> 340  
 <212> DNA  
 <213> Pinus radiata

<400> 1814  
 gttcaaggga gacgggatat tcagagtcgg atcgccgcca tggccgtaga caccatacag 60  
 atggcgagag tgggtgtaaa aatgaagatc ggaggaggcg gctgcgagga agaggcgctc 120  
 tccgctgtga aggaaacgca ttccagagga gtgaggaaaa ggccgtgggg gagattcgct 180  
 gccgagatca gagatccctt gaagaaaacc agagtctggc tgggcacttt tgacactgca 240  
 gaggaggccg cccgagccta cgataacgct gccagaaatt ccgcgggggc aaggcgaaaa 300  
 ctaattttct tctgtctccc cacaatgaca ttagcaccaa 340

<210> 1815

<211> 433

<212> DNA

<213> Pinus radiata

<400> 1815  
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 tcttctgtta agatggtgag atctccctgc tgcgacaagg ttcataccaa taacaaaggc 120  
 gcctggacca aagaagaaga cgagcgtctc atagcacaca ttgaagccca cggcgagggc 180  
 tcatggcggtt ctcttcccaa ggccgcaggg ctgctgcgat gtgggaagag ctgcaggttg 240  
 cgatggataa actacctgcg tccctgatctg aaacgcggaa gcttttcaga agaagaagac 300  
 gatctcatca tcaaactcca ctccctctct ggcaacaagt ggctcgcttat tgcagggaga 360  
 ttgccagggc gaacggacaa ccgaaaataa aaaattactg gaacacgcac atgaaaagga 420  
 aattggtgag cag 433

<210> 1816

<211> 225

<212> DNA

<213> Pinus radiata

<400> 1816  
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 gcagatgtag aaactcttct tctcaggtt gatgaaacag cttctgctga tctgacagtg 120  
 ttcccaggtt ttgttacctt ttatgtacca tacgggttcc ccatatggca cactttttaga 180  
 cccacaataa ctcaaacttc caatgtttat aagccaacag ctgta 225

<210> 1817

<211> 337

<212> DNA

<213> Pinus radiata

<400> 1817  
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 ggtgctgctg ggtcagatc tagtggtgat tccgagcatt cggatataga ggcgtctttt 120  
 aaagaggccg aatgcagtca ggccattggt gaaaggaggc ctcgaaacg gggcaggaag 180  
 cctgccaatg gtagagaaga acctctgaat catgtagaag ctgaaaggca gaggcgagag 240  
 aagttgaacc agaggtttta cgcactccgc gctgtggttc ccaatgtgtc caagatggat 300  
 aaggcctctc tgttgggtga tgccatttct tacatta 337

<210> 1818

<211> 390

<212> DNA

<213> Pinus radiata

<400> 1818  
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 gtggctcctg gggcgaggt gatagaagaa gaagaaacct accatataca catacatata 120  
 ttatatacat agacacatgg gggctccgaa gcagaaatgg acttccgaag aggagggagc 180  
 tctcaaagca ggtgttgaga agtatggcac tggcaagtgg cggaccattc agaaggaccc 240  
 tgagtttgga cactgcctcg ccgctcgctt caatgtggat ttgaaggata agtggcgcaa 300  
 tatgagtgtg agtgctagtg gccaaaggtc aagggataag gttaaagact caagagtaaa 360  
 agctattgcc tctctgcctt attcatcaag 390

<210> 1819  
 <211> 367  
 <212> DNA  
 <213> Pinus radiata

<400> 1819  
 attcaaaatg ggaaagaagt tggagctgaa acgcatccaa aaccctaata gttcacgtga 60  
 ttccttctcc aaatgcaaga ggggactgct aaagaaatcg gtcaagctct ttgttctctg 120  
 tgatgctgaa gtttccctca tcattttatc tgaaaccgcc aagatttacg agtttgcaag 180  
 caacaagtcg tgactagctc ttgtgaattc ttctgatcaa gttagagatc catatactga 240  
 tatataaaag catactttca cattgcaatt ggagcagatc tagatgcaga agtgcaacct 300  
 tattatacct aaaggccatc agctgcaaat caagacccat tttctatctt ttgagatcgt 360  
 gatacag 367

<210> 1820  
 <211> 487  
 <212> DNA  
 <213> Pinus radiata

<400> 1820  
 acgatcttca ccctcggtgc gctctctgct tatcccgatt cccagccaac tgctattata 60  
 ttcggagtac tgtacttcca gaactggtat cttcaagcac caagaccatt ttctgagctg 120  
 ttaaaagatac tatgagtgat atggatcggt catcatcaga agattcagtg gatttctcaag 180  
 gtgatgtgaa tgcaaaactac aagatgggtt tctcggaaga tgaaaaggat ctcataagca 240  
 ggctgtacaa tctactgggc cagaggtggg ctttgattgc tgggcgaatt cccggcagaa 300  
 ctgcagagga aatagagaaa tattgtagca ggcgatatat tagtgagtac taggtcacat 360  
 gggtttctaa tagtcaatga agaagaaggg tagaagcagc cttgcctatc taactgattt 420  
 aagtttggga tatatatatc gactttgagt gatggccata tcttctgggg tttataagga 480  
 agtatgt 487

<210> 1821  
 <211> 319  
 <212> DNA  
 <213> Pinus radiata

<400> 1821  
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 gtctctctgg caagatgggg agaactccct gctgtgaaaa aggtcataca aacaaaggcg 120  
 cgtggaccaaa agaagaggac gatcgccctc tcgctcacat tcgagcccac ggcgaaggcc 180  
 gctggcggtt gcttcccaag gccgcagggc tgatgcgatg cggaagagt tgcaggctcc 240  
 gatggataaa ctacttgctg ccagtcctcaa gcggtggaac ttctcagaag aagaagatga 300  
 gttcatcatc aaactccac 319

<210> 1822  
 <211> 320  
 <212> DNA  
 <213> Pinus radiata

<400> 1822  
 gcaaagagtt gcagattgctg ttggctgaac tatcttcgtc ccgatattaa acgtggtaac 60  
 atttctcccg aggaagaaga gctcattatt cggttgcate gccttcttgg aaatcgggtat 120  
 gtagagaatc gggggacatg atttattcat gcgccagaat ttcacgattc ctcatcgaat 180  
 tagtcatgca atgtttgtgc aggtgggtctc tgatagcagg acgactgcct ggtcgaacag 240  
 acaacgaaat caagaattac tggaacactc atatgagcaa gaagccatgg ctgtcaatgg 300  
 acgaatctca gtccaatact 320

<210> 1823  
 <211> 338  
 <212> DNA  
 <213> Pinus radiata

<400> 1823  
 gtcgagctcc ttgctgcgag aaaacccata caaacaaagg cgcctggagt aaagatgaag 60  
 atgaagcact cgttgcatat attcaagccc atggagaagg cagttggcgt tcccttccca 120  
 aggcgctggt gttgcagcgg tgtggcaaaa gctgcaggct tagatggata aattatctcc 180  
 gtccctgacct caaacggggc aatttcagcc cagaagaaga tgagatcatt atcaaacttc 240  
 attctatgtt gggtaacaag tggctcttga tcgcaagcaa attgccaggg cgaacagata 300  
 atgagataaa gaattactgg aacactcaca ttaagaga 338

<210> 1824  
 <211> 332  
 <212> DNA  
 <213> Pinus radiata

<400> 1824  
 gccgaggtga ggaggcatta cgagcttctt gttgaggatg tgactgtgat tgagtctggc 60  
 cgggttgctt tgccctgctta ttctgaaaat tcgtatacac cgcccgaatt gatgtcagat 120  
 cagttgggag atctcacaaa acagcaggcg gtttctgtga aggtccctc ggccaaggca 180  
 tccgaacagg agcgcaaaaa gggcgtgccc tggactgaag aagagcacag actcttcttg 240  
 atgggattga ataaatatgg caaaggatgat tggagaagca tatcaagaaa ctttgtgggc 300  
 tcacggacac ctactcaagt tgcaagccac gc 332

<210> 1825  
 <211> 301  
 <212> DNA  
 <213> Pinus radiata

<400> 1825  
 accgtcgaga gagcttcata tctaaccaat aataacacct gtatggcttc atagcttcac 60  
 agcaacaggg caccatgggc cgagctcctt gctgggataa aagaaaggcg 120  
 cctggactct agacgaagat aaaatactcg tcgattacat taccaaacat ggccatggca 180  
 actggcgcgc actgcccagg caagcagggc tcttgcgatg tggaaagagt tgtcgctgc 240  
 ggtggacgaa ctacctgata cccgacatca aaagagggaa ttttattcca gaagaggaat 300  
 a 301

<210> 1826  
 <211> 498  
 <212> DNA  
 <213> Pinus radiata

<400> 1826  
 tttgcatcca attcttcctg tatcatctaa ttgctcagtc tagcaattac gcaatctcgg 60  
 tccccagtc tgtctgacga agagggttaat gcaactgctg cctctgtggg caatctgacc 120  
 ttgctgctgc atgcatctca gcgacgattg gaaggcaagg tcgcaataat aacgggcgga 180  
 gcatctggca taggagaagg catcgctcgg ctcttcacaa agcacggagc cagagtcata 240  
 atcgagaca ttgcagatga aaccggcaaaa attctggccg aatccctttc gcctccggcc 300  
 acttacgtgc gctgcatgtg gagcaaagag caagacgtca gcgctgcggg ggatttggcc 360  
 atggagaagt acgcgcagct ggatatcatg tttacaacg caggaaatcg cgatacgggt 420  
 aatgtttcaa ggggagtggc agagtacgag atggagcagt tcgaccgagt tatgagcgtc 480  
 aacgtcagag gggatgatg 498

<210> 1827  
 <211> 551  
 <212> DNA  
 <213> Pinus radiata

<400> 1827  
 cgtggctctt cccggcagac ctagtaagcc gactactgta aatttattct tttagggtta 60  
 cagaagaaga aaatacaaga tgggcagatc tccttgctgc tcaaaagaag ggctcaaccg 120  
 tggggcctgg accaaaaggg aggatatgat tctctccgaa tacattcgaa ttcattggcg 180  
 tggcggatgg agaaatatgc ccaaaagagc aggtcttaaa cggtgtggaa agagctgcag 240  
 attacgatgg ctgaactatc ttccgccccg cattaaacgt ggaaacattt cccctgatga 300

ggaggaactc	ataattcggc	tccatcgct	tcttggaat	cgatggcgc	ttatagcagg	360
aagattacca	ggtcgaacag	acaacgaaat	caagaactac	tggaacactc	atatgagcaa	420
gaagctgctt	ccattgaacg	aatctgaacc	caagactttg	cctgtcccca	agaggaggtc	480
gcaatctcct	tctccctgc	aaaatcgagt	ctttaaagcc	aaccctgtga	aaataacaac	540
ggtggtcagt	c					551

<210> 1828  
 <211> 256  
 <212> DNA  
 <213> Pinus radiata

<400> 1828						
ctgaaattcg	gatgccgaaa	tcccatgaga	agatatggct	gggacccctat	aataccgccg	60
agcaagccgc	ccgtgcttac	gacgccgctg	tgtattgtct	gagaggaccc	gccgcaaac	120
tcaattttcc	agaaaccgtg	ccgggtattc	cgtctgcgtc	ttccctttcc	cggcagcaaa	180
ttcagcatgc	agccaccaga	tatgccttgg	gtgaaatccc	tttgatttcg	ccctctctgc	240
aaaatattga	ctcgag					256

<210> 1829  
 <211> 372  
 <212> DNA  
 <213> Pinus radiata

<400> 1829						
gcagattctc	aacagaattg	ggaaagtttt	gtgaatattg	aagatggctc	agtgccatga	60
aatcattgaa	agtcgttgca	gagacagcca	tggcgcatca	gatctgaagc	tgtttgccat	120
ggccgcgggt	ctggtgacga	gcaccggagg	agtatgtttg	ccggttctgt	ttgccagata	180
ttcccgaggg	ctcaaatatt	acggcactct	tctggtactg	gtgaaatgtt	tcgctgccgg	240
agtgattctg	tccacaggat	ttgtccacgt	catgccggaa	gccttccgcg	ctctggaaag	300
cgactgcctg	ccggatcctc	catggcacca	gttcccgctc	gccggactcg	tggccatggc	360
cggggcaatc	ct					372

<210> 1830  
 <211> 486  
 <212> DNA  
 <213> Pinus radiata

<400> 1830						
agcgggtggt	gatttagccg	agggcgaaga	ggaggacgaa	gaagggtctc	gtaacaaacg	60
tggcgattga	tcctacctta	gcctgaaaat	gctgtcagga	ggctacgcaa	ccagatccga	120
cactactact	gtcaacaacg	gatccgctaa	tggcccaata	ggaagtgtct	ccccaagaat	180
taactcgata	caaaataata	atccaggagc	tgtcaggcct	ggctggggaa	ccatgccctt	240
tcacatgaat	ccttatcctc	cccaatcaat	gcctcttccg	cccccaatg	gtatgcaggg	300
tcagcttggt	tgcagtggat	gtagaactct	tcttggttat	ccgcaagggt	caccaaagt	360
ttgctgtgca	gtatgcaaca	cagtcactcc	agttccacct	cctgggacag	aaatggctca	420
gctaactctgt	ggacgttgct	gtacattgct	aatgtatggt	cgtggagcaa	ctagtgttca	480
gtgctc						486

<210> 1831  
 <211> 330  
 <212> DNA  
 <213> Pinus radiata

<400> 1831						
gtttttccgc	aggaagtttt	gatttgagta	ggaaatcctt	tggcctcctg	gagctttgat	60
ttgctcagga	aaccctagcc	cttcggttcc	tgaagctttg	cttttcgtag	gaaacccttt	120
ggcaccggta	ggcgatggct	cccagcaaca	acagaagaga	cgacaatgga	gcacgaggag	180
ttcacttcag	gggcgtcagg	aagagccct	ggggtcgata	cgcggcggag	attagggatc	240
catggaaaaa	agttcgtctt	tggctcggca	cctttgacac	ggccgaggaa	gccgccgggg	300
cttatgacac	tgccgctatc	tccttcagag				330

<210> 1832  
 <211> 413  
 <212> DNA  
 <213> Pinus radiata

<400> 1832  
 aaatctgact atcgggatag tgatgatgaa ggaggaggta ctgttcgaga aggaaaggat 60  
 ctgcaaacct caaatattcat cgattatttt ggtcaaagta atcatacaga agaagcagaa 120  
 aatgagcatg atgcatcagt ggataccaaa gggcccttgg aatccagcaa tgaagtctggc 180  
 catcctacca cataccccga atcttcttca ttgtcagcgc aaggctctga gcctcgagtt 240  
 ttttcctgta attactgcca gagaaaattc tacagctcgc aggccttagg aggccatcag 300  
 aatgctcaca agcgagaacg caccttggca aagagggggc aaagaattgg ggcttttcaa 360  
 cacaggtaca taagcatggc atccctgcct ctccatggct ctacagaatc agc 413

<210> 1833  
 <211> 260  
 <212> DNA  
 <213> Pinus radiata

<400> 1833  
 gctatttgca gcatttccct ccatccgtac ccaaaagatg ctgacaaaca tttactagca 60  
 agacagactg gactgaccag aagccagggt tcaaattgggt ttataaatgc acgtgtccgc 120  
 ctttggaac ccatgggtgga agaaatgtat atggaggaac tttagagaggc cgaaacacag 180  
 aatcatgcag cagattcgaa ggtaacaaca gaaagtgggtc aaaacaatga agaaacggtg 240  
 tcaaaggaag gagctgggaa 260

<210> 1834  
 <211> 338  
 <212> DNA  
 <213> Pinus radiata

<400> 1834  
 aattgaatcg gccatgggtt tgtatgaatt gttacatgta cagcagattc agcaaataca 60  
 gcagcagcag tttcaattgc aacaacaaca aatagcagca gcggcttcaa tccaccatat 120  
 gggtcgaaac cctctgggtc ccagagctca gccatgaaa cttcatggca gcagcctatc 180  
 aaagccggct aagcttttaca gaggcgtgag gcagcgccac tggggtaaat gggttgcaga 240  
 gatcagggtta cccagaaaca gaaccagggt atggctgggg acttttgata ctgcagagga 300  
 agcggccatg gcttatgaca aggctgctta caggctga 338

<210> 1835  
 <211> 240  
 <212> DNA  
 <213> Pinus radiata

<400> 1835  
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 gaaaagaata cgttccaagg attcaggaga agatgggtgaa gatagacaga gataacatcc 120  
 tttcattgtt actgagcccg gtgaacttgc aagagggaaa aagaatgggt tagactatct 180  
 ctttgatctt tatgaacagt gcgggaaatt tctgctggat gtgcaacata ttgcgaagga 240

<210> 1836  
 <211> 349  
 <212> DNA  
 <213> Pinus radiata

<400> 1836  
 gataaatcca gatgagggtt tagcagtc aaactgcac acatgcccga 60  
 tgaaagtgtg tctacaaaga acctacgtga ccggcttcta aggatgggtga agtctctcaa 120  
 ccctaaagtg gtcacagttg tagaacaaga ggtaaacact aatactgcac ctttcttacc 180  
 ccggttcatg gaagcattaa actattactc atcagtgttt gagtctctag atgctacaat 240  
 tccaagggat agtagagatc gtatgaatgt tgaaaaacag tgccttgccc gagacatagt 300

gaacataatt gctttgtgag ggggaagaaa ggggttgagag gtatgaagt 349

<210> 1837  
 <211> 457  
 <212> DNA  
 <213> Pinus radiata

<400> 1837  
 gaaaagtatg ttcaagtttt ttccattcaa acatatcctt gttggagggg ttcggaaccg 60  
 tctccggtcg tcttcaacca gtctgacccc aactcgcagt ctcttgact ctcaaagtat 120  
 aaattttttca agaattggcta attcgaatcg aggatgcttc atatgcggtt ctgaggatca 180  
 tcgaaaagcg gactgtccca caccgcagaa acttacctgt tatcagtgcg gtggagtggg 240  
 ccatcagtct cgggactgct cttcctccga gaagcgcaaa acctgctaca aatgtggtga 300  
 agagggccat atctctcgcg actgttccaa tgcgccaacc tctgagtatt ccggtggtaa 360  
 ttccggcacc gaatgttata aatgtggtaa attgggtcat atctctcgct cctgtccgac 420  
 aatgagtcga actgctgact atgctagggc tcctagc 457

<210> 1838  
 <211> 395  
 <212> DNA  
 <213> Pinus radiata

<400> 1838  
 ctgaaatata gttaaattca ctcttttggg ctgagttact ggcgcgcca tatggaaaat 60  
 ctccccaatc agcaacctga ccttgaaatt gctcaaacac acgaggatcc cgggtcccgc 120  
 caatttaagg gaattcgact gcgaaaatgg ggaagggtggg tatcggaat ccgataacc 180  
 aaatctcgag agaaaatatg gctgggctct tacacgactc ccgagcaggc tgcccggtct 240  
 tacgacgccg cagtgtattg tctgaaaggg cccaacgcca aattcaactt tccggaaacc 300  
 gtgcacgaca ttccgtctgt gacttctgtt tcccgtcagg aaattcagca cgctccctc 360  
 aaatatgcct tgggccagcc cctccgagt ttgca 395

<210> 1839  
 <211> 395  
 <212> DNA  
 <213> Pinus radiata

<400> 1839  
 gctaaccacag cccttatata tcatcatggg aagcttcttg cacttcaaga ggcagataaa 60  
 ccttatgcac ttagagtcct tgaggatggg gatttgcaaa ctcttgggct aatggattat 120  
 gataataaat tagcacactc cttcactgca catccaaagg ttgacctgt tacaggggag 180  
 atgtttacat ttggttacca acacaagcct ccctatttaa cttaccgggt tgttacaaag 240  
 gagggataaa tgcttgatcc agttcctata acacttccca aacctgtcat gatgcatgac 300  
 tttgccataa ctgataacta tgcaatcttc atggatcttc ctctctattt ttctccaaag 360  
 gatatggtaa aagggtggact catcatgtct tatga 395

<210> 1840  
 <211> 468  
 <212> DNA  
 <213> Pinus radiata

<400> 1840  
 ctcatctcag tgattcactc actgaaatta ttgttagaat cactgttttg gcccagagc 60  
 ttctgcgtcg ccaaatatgg agatacgctt ccagcaggaa aacgaccagg acattgctcc 120  
 gccacacgaa gatcgcgtgt cccgccatt taaaggagtc cgaccgcgta aatgggggat 180  
 atgggtatcg gaaatccgga tgccgagatc tcgacagaaa atatggctgg gtcgtacaa 240  
 aaagcccagag caggccgccc gcgcctacga cgccgcagtg tattgtctga gagggctcga 300  
 cgccaagttc aatttcccca attctgtgcc cgacattccg tctgcgtctt ctctttcccg 360  
 ccagcagatt caactcgctg ccgccaataa tgcgttgat cagtcctctt caagcccgc 420  
 gtctctgaac aataataaag aggaaccgcg gtcaccgtcg cagtcgtc 468

<210> 1841

<211> 378  
 <212> DNA  
 <213> Pinus radiata

<400> 1841  
 aaacaatata gtcgacattg ttgcagcatc tagagctatt cgtgaaccac gtgtagtggt 60  
 acaaacaacc agtgaaattg acatccttga tgatggatat cgatggcgca agtatgggca 120  
 gaagggtggtg aaaggaaatc caaatccaag gagttactat aaatgcacaa atgctggatg 180  
 tccagtggagg aaacatgtgg aaagagcatc acatgatcca aaagcgggtga tcacaacata 240  
 tgaaggaaaag cataaccatg atgtgcctgc tgccagaaac agcagccatg ataatgctgc 300  
 aaaaggggaat ggggcagctc ctctagcaat gcagaataat gtcccagcgc ctatgaatgc 360  
 tataaccaga cctgttcc 378

<210> 1842  
 <211> 382  
 <212> DNA  
 <213> Pinus radiata

<400> 1842  
 ctcccacctc catttcactc tgccgagtc attactctcc ctatcgtcga accacgtctt 60  
 tctcatcgac caacaatgac tcagcagaca acctcaccaa cagttagtcg cgccgcactt 120  
 gctcttccca cttctgcctc atccacatct gcaaagtctg cagctgttcc agtaccagcc 180  
 caagccaacc ctgcgaaacg tctcgttcg gatctctcgg cagaggagaa gcgagaggct 240  
 cgtgctcatc ggaacagaat cgcagctcag aactctcgtg acaaacgcaa acagcagttc 300  
 actagtctcg aacaacgagt catcgacctc gagaacgaga accgccaatt acgagacgct 360  
 ctgcgcactt cgcagccgaa cc 382

<210> 1843  
 <211> 314  
 <212> DNA  
 <213> Pinus radiata

<400> 1843  
 catagaaaga gctttatgtg tcttgaattt gaaccctctc ctctgttttaa agaatccgag 60  
 ctttgcaaac acgccttgag ctagactcgg gaatacccca gcaacaatcc gacatggcta 120  
 aatcctcgca aaaccagaaac ccccgcaaca gacgcgaaaa ccgcttacgg aagtcacggc 180  
 agttcaaggg aatacgaatg agaaaatggg ggaaatgggt gtcggaaatt cgaatgcca 240  
 attccactgg gagaatttgg ctaggctctt atgacacgcc ggaaatgggt gcccgcgcct 300  
 acgattttgc ccgg 314

<210> 1844  
 <211> 384  
 <212> DNA  
 <213> Pinus radiata

<400> 1844  
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 aaactgccaa ataaagtcgc ggcagttcaa aggaatccga ctgagaaaat gggggaaatg 180  
 ggtgtcggaa attagaatgc cgaattccag ggccaaaatc tggctgggct cctacgactc 240  
 cccggaaaaa gctgcccgcg cctacgactt tgcgttgtac tgtctaagag ggtcgaaggc 300  
 cacattcaat tttcccgaact ccccgccgga aattccatgc gcctctgacc tgtcgccgcc 360  
 gcaaattcaa gccgcccgcg ccag 384

<210> 1845  
 <211> 171  
 <212> DNA  
 <213> Pinus radiata

<400> 1845  
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ggaatgatac	agcagcatgc	ctggagacca	caaagagggc	ttccagagag	ggccgtttct	120
attctccggg	cttggctatt	tgagcatttc	cttcatccgt	accccaaaaa	t	171

<210> 1846  
 <211> 436  
 <212> DNA  
 <213> Pinus radiata

<400> 1846						
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gtcgccctcg	ggctgggtga	catgggtggag	aaactgggtg	ttgaaacttc	tgcgttgat	180
agttcgaaga	agcctctgca	ttttcttttg	gggaacttcg	ctccagtctc	ggaaactgcc	240
cccaaatecg	acctgcatgt	tggtgggcaa	cttcctagtt	gcttggatgg	agagttcgtg	300
cgcgttggtc	ccaatccgaa	attcgaccg	gtagctggct	atcactgggt	tgatggagat	360
ggaatgatcc	atggtctgag	aattaaagat	ggtaaagcca	catatgtgtc	acgttatgtg	420
aagacatcac	gcttga					436

<210> 1847  
 <211> 303  
 <212> DNA  
 <213> Pinus radiata

<400> 1847						
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gccagatctc	cgaccctgga	acccgtggca	acggtaaagc	tgccgtccag	agtcccatac	180
ggattccacg	gcacattcat	cacttctgaa	gagcttgcca	agcaggtgcc	gtgaagacgc	240
gctgtcttcc	gcccttcttg	ctttcttgat	tacctacaa	cacctgggtc	tgtactttct	300
tta						303

<210> 1848  
 <211> 551  
 <212> DNA  
 <213> Pinus radiata

<400> 1848						
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agaagaatgt	gtggaggtgc	tatcatctcg	gactttataa	tacccccctgc	gagccgaggc	120
cgccgggtga	ctgccaggga	tatatggccc	gattttgata	agttctctga	gtttattaat	180
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tccgacgatg	acgagttcct	cgattttgag	gagagctatc	agaacaagaa	gaagaagcag	300
caacagccga	tatccccac	caagggtttc	gagcttcctt	tagctcgggg	tcttgatgga	360
ccggcgccca	agagcgcggt	gagaaagagg	aagaatttgt	tcagagggat	caggcaacgt	420
ccatggggga	aatgggctgc	agagatcagg	gatcccagaa	aaggcgctag	ggtttggtcg	480
ggtaccttta	atacggcgga	ggaagctgct	cgggcttatg	atgcagctgc	acgaaagatc	540
agaggtaaga	a					551

<210> 1849  
 <211> 527  
 <212> DNA  
 <213> Pinus radiata

<400> 1849						
gaacagtcca	gcctcgttgc	accctcctca	gtcaccacaa	acagcactgc	agcgaaagga	60
caagggcctg	ctgatactga	gtctcaacca	gacctaaactg	ctgccgagaa	gccttcaatg	120
gagcccaaga	aaccgccaag	aaagaaaggt	cagaaacgaa	acagggagcc	cagatttgca	180
ttcatgacca	aaagtgatgt	ggatcatttg	gaagatggct	atagatggcg	caaatatggc	240
caaaaggctg	tcaaaaacag	ccctttcccc	aggagtact	atcgttgcac	aaatggaaaa	300
tgctcagtga	agaagagagt	ggagcggttcg	tcagaagatc	caggaattgt	gattacgaca	360
tatgaaggac	agcatttctca	tccaagcccc	gccatattgc	gtgggtcagc	agaatcccaa	420

tcccactttt	cagatcaaag	attgaattct	cccttcactc	aaacgccatt	gatcagattc	480
cctccccacc	caatgatgat	gagtagtact	aaccagggtc	cagctgc		527

<210> 1850  
 <211> 226  
 <212> DNA  
 <213> Pinus radiata

<400> 1850						
gagagaaggt	ggaagtacag	caatagaaa	tgacttgaaa	agtgaaaatc	ttgaagaaaa	60
agaagcgaag	gcaagtgaag	atgaagataa	gatgctgaaa	aaaccagaca	aattggtacc	120
ttgtcctcgc	tgtgacagtt	tagataccaa	attctgctat	tacaataatt	acaatgtgaa	180
ccagcctagg	catttctgta	aaaattgcc	gagatattgg	actgct		226

<210> 1851  
 <211> 236  
 <212> DNA  
 <213> Pinus radiata

<400> 1851						
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gcacgacaca	tgcgtccca	caccggcgac	cgcccgata	agtgtccat	ctgcaccgac	120
tcgtttggcc	gcagcgacct	cctgaagcga	catgagaaga	agatgcactc	aaacggggcag	180
agcgcagcga	gcacgcccac	tgggccagg	cagaacaaat	ttgatagcca	gtttac	236

<210> 1852  
 <211> 455  
 <212> DNA  
 <213> Pinus radiata

<400> 1852						
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aattttctcca	gcagaaatcc	agcctccac	tgcgcgcat	aaattttctc	aacggaaatc	120
cagccggccg	ctaaattctc	tgcactgaca	aaagcccaca	ggctaacaga	ttccgacatg	180
gatcgcccca	ttccctggcc	atctgcatac	acagaaatct	agactttgaa	aatctttcta	240
aattctgtat	ggagccctga	actgtagggtg	cagggttcga	ttaccgctat	ggatgaggcc	300
gcgcctgcc	aggctcctct	cccctgtgac	tactgtggcg	aagcgaatgc	agttctctac	360
tgcgagctg	actccgcaa	gctctgcctg	ccatgtgacc	accacgtcca	ttctgccaat	420
gcctgtcca	agaagcatgt	ccgatccag	ctctg			455

<210> 1853  
 <211> 324  
 <212> DNA  
 <213> Pinus radiata

<400> 1853						
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gtggcaggga	cggactcagc	gtgctggatt	tgtacagctt	cctctggatc	gtagtattct	120
ctctaaatcc	aggataagg	taaaaacat	ttctatcata	aggattttgg	agtggacgaa	180
gatggtaatt	ggatgctatt	gggctggaag	ggaagaacta	ttcatgctct	gtctacgtgg	240
agaccttcga	catgatttgg	cgatggagaa	ttttctctc	tgcaaagagt	aaggcatgat	300
acatatttgt	gattctgcc	aggc				324

<210> 1854  
 <211> 316  
 <212> DNA  
 <213> Pinus radiata

<400> 1854						
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tcccagcga	tctgtttctg	tcttacgggc	ttggctattt	gaacattttc	ttcatccgta	120

tccaaaagat	gcagacaaac	atatgctcgc	gagacagact	gggcttacca	gaaatcaggt	180
ctcaaattgg	tttataaatg	cacgtgtacg	cctctggaag	cctatgggtg	aagagatgta	240
tgtggaggaa	acaaaggagg	cagaagtaga	ccatggatca	aatgataaaa	caggtaagga	300
gagtggcgag	aaaaaa					316

<210> 1855  
 <211> 393  
 <212> DNA  
 <213> Pinus radiata

<400> 1855						
cggaataatca	cccccttgcg	ttgcgcacca	tcgccccgac	gtaccgaagt	agcggacacg	60
gttccgtaat	attgtacagg	cgcgcgccca	ccccacagc	gacgacagac	acacattctt	120
taacgatcca	tctccttctt	gacgaaacct	ccacccccaa	cgattgacga	tgcccaaggc	180
ggacagccag	agcggatccc	gagattctac	ggtcggcccc	gctcaaggta	cgctgaagcg	240
gaaccaggcg	tgccaccaat	gtaggaagcg	gaaactgaaa	tgcgacgcca	aaagaccttg	300
ctcgacttgt	gtgaggtcac	acaaccacgc	catcacccac	gctgggtccag	acgctgtttt	360
gccgcccttc	ccagaatgta	cctttgacga	agt			393

<210> 1856  
 <211> 359  
 <212> DNA  
 <213> Pinus radiata

<400> 1856						
ggaaagtcca	acatagaaat	cttctgtgca	ttcatagaat	aaatattcta	caggctgcac	60
tgtaatttag	gcgagaaatc	gaataaaaata	tacatttgtt	tgtttacgat	ggagttggca	120
gatgagcatt	ccatcctccg	ctataagaaa	cccaagctct	ccaagaatgt	cgtttccgag	180
cgccgcccga	ggcagaaaat	gaacaagctt	ctctacactc	tgagggctct	ggttcccaat	240
atttccaaga	tggacaaggc	atcgatttta	gcggacgcca	tcgaatatgt	ggagaagctg	300
aagcaacagg	tggagagagc	tgagtctgac	gttcaatcca	ccaacgtctc	ggctctatc	359

<210> 1857  
 <211> 459  
 <212> DNA  
 <213> Pinus radiata

<400> 1857						
ggaaggcaat	gagagtgate	tcctcaaggg	aatgaagaag	gcaaggcgctg	agagaggatc	60
aacagcaaa	gaacggatta	gtaaaatgcc	tcctgtgtct	gctggaaaac	ggagttctat	120
ctacagagcg	gtcacaaggc	atagatggac	aggacgatat	gaagctcatc	tttgggacaa	180
aagtacttgg	aaccagaacc	aaaataaaaa	gggcaagcaa	gtgtacctag	gtgcctatga	240
tgaggaggag	gctgcagcca	gagcttatga	ccttgccgct	ctgaaatatt	gggtccttgg	300
aactctcatt	aattttcctg	ttagtgacta	tgctagagat	attgaagaga	tgacagacat	360
ttcaagggaa	gatttccctg	cttctctcag	acggaaaagt	agtgggtttt	caagggggaat	420
gtcaaaaatac	ccgtggactg	gccaaagcaat	cacaaactg			459

<210> 1858  
 <211> 368  
 <212> DNA  
 <213> Pinus radiata

<400> 1858						
aaaaaggcgt	cagaatgggg	tgagtctgta	gtaagtacaa	gcgaaaacag	taatgacttg	60
gattcctcta	cttattctga	aacctcttcc	cctgctcaag	gatctgatcc	tcgggttttc	120
ccctgttaatt	tctgtcaaag	naaattctac	agttctcaag	cattaggagg	tcatcaaaat	180
gcccataaagc	gtgagagaac	tttggctaga	agggcacaga	gaatggggtc	ttttgcacaa	240
agatattcaa	gcatggcatc	acttcactc	cacggttcct	cggaaaacaag	ttggacgccc	300
agtcggtttt	tagggataaa	agcacattct	ttgattcaca	aacctttccc	tgaagggtgat	360
aacctgcc						368

<210> 1859  
 <211> 497  
 <212> DNA  
 <213> Pinus radiata

<400> 1859  
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 tccgtctcgt gcacacgctg atggcctgcg cagaagcggg gcagcgcggg aatttgcca 180  
 tcgcgcggga aatggtgaaa gaagtgagaa ttctggcttc agcacagggc ggggcaatga 240  
 gcaaggtcgc cacatatttt gccgaggctc ttgccggcg aatctatggg tttctccctc 300  
 aggacacctt gcggttcaac cagaacgacc cttgtccga ttttctgcaa tttcatttct 360  
 accaaacctg cccctatctc aaattcgcgc acttcatagc caaccaggcc attctggatg 420  
 ccttctccgg gcaccaacag gttcatgtca tagatttcaa tctgaaacag gggatccaat 480  
 ggccggcctt gatacag 497

<210> 1860  
 <211> 254  
 <212> DNA  
 <213> Pinus radiata

<400> 1860  
 gagtaggagg cggcggcgga ggcaagggaa gcccgtagc aggcgtcagg atgagaaaat 60  
 ggggaaaaatg gggtttctgaa gtgaggggagc cgaacaagcg gtctcgcata tggctcggct 120  
 cctattccac tcccagggcc gctgccaggg cctatgatac tgccgttttc tacctcagag 180  
 gaccctccgc gactctcaat ttccccgagg aagcacgtaa ggagcagcag agcgacctca 240  
 ggcttttcga gctc 254

<210> 1861  
 <211> 515  
 <212> DNA  
 <213> Pinus radiata

<400> 1861  
 catcttctcc ttacaaaagt agtccccctc ttgactccag gcggtcttcc cagtccataa 60  
 cgatacggat tacacccacg caccocatgt cttccacctc atcgtattct tctccctccc 120  
 ctgacacacc atcacagtct gccgtgtgc gcccgacatc tacccgagac gattcttccg 180  
 tcatggaacc tccacgtaag cgagccaggg ctgatcttaa cgctgaacag cgaagagagg 240  
 ccagggccca ccgtaatcga attgccgctc aaaactctcg cgataaacgc aaggcgcaat 300  
 tcaattacat ggagcagcgc gtggcacaac tggaggaaga gaaccaacga ctacgagcag 360  
 gcatgggect ctctcaattc acgccagccg acaacgacaa gttcgtcagc ctcgagagag 420  
 aatcagtaca ggcccgcgag aacagagagc tcaaggagag gatcaagagt ctagagagcg 480  
 ggtggtcggc cgtcatcaaa gcgttgccagg cctca 515

<210> 1862  
 <211> 532  
 <212> DNA  
 <213> Pinus radiata

<400> 1862  
 agtttgctgc tctacacctg tggttgcaag cgtttgagc ttcaagaggc aaggtttggg 60  
 ctgtgattaa ttcattggcg cggcggcgac gactacgttg ggttggtcga aggtggattt 120  
 gatacgggctc atgcggctgc gagagcttac gacagggcag ctatcaagtt tcgaggagtt 180  
 gaagctgata taaattttac tctcaccgac tatcaagaag atttagacca gacgagcaag 240  
 ctctctaaag aagagtttgt gcataattctc cgctcgtaaa gtactggttt ctctcgaggga 300  
 agttccaagt atagaggcgt taccctgcac aagtgtgggc gatgggaagc cagaatgggt 360  
 caattcctag gaaaaaagta tatatatattg ggattatttg acagtgaaga ggaggctgca 420  
 agggcatatg ataaggctgc tatcagggtgc aatggaaagg aggcagtaac gaactttgat 480  
 cctagcttat atgaaaaaga aattcttgaa gaaagaagag agagtcagac tt 532

<210> 1863

<211> 497  
 <212> DNA  
 <213> Pinus radiata

<400> 1863  
 ggcacgagcn cttctgattt tttggccgag ggttcgttgc agaaaggcca agggcaagta 60  
 ggaggcgata gacctacttg aaaatggagg tgtctgcgaa gaagcgaaag gccgaagaag 120  
 cgaatggcgt ggtcgatata gccgtggaag atgctcggaa aatgttggaa cccttcaccc 180  
 gagagcaact attagatatt ctgcaggagg cggcgacgca gcacctggac gtattggagc 240  
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 aaggggtcgt cattatggac aagaacaccg gtaagagtaa gggttacgga ttcgttactt 420  
 tcaagcacat ggacggtgct cttaatgccc taaaggagcc cagcaagaag atcgacggcc 480  
 gcatgactgt cagtcag 497

<210> 1864  
 <211> 308  
 <212> DNA  
 <213> Pinus radiata

<400> 1864  
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 agttacagtt gccggttcac ggagcccgaa aaggctcatt agcagaggaac gggcggggcg 180  
 gcagttttac ccgaagccca tcgggcaact ccacggccac ggacgggctg gtgcgcctgc 240  
 tgctgcatgg tgcccggggg ctctgcggga ctggtcaaca ccgggaaggg catgggcgtg 300  
 gctaatac 308

<210> 1865  
 <211> 395  
 <212> DNA  
 <213> Pinus radiata

<400> 1865  
 aagcgggtgc agattgttca caatgatttc aagtggcgct ctttcttctg cagcagagat 60  
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 gacttatcaa acggttctta atgtagcaga gggagaaacg aggttgcaca ttgttgattt 180  
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 tggctcctccc atgcttcgca taactggaat cgagtttccc caacctggat ttagaccagc 300  
 agagagaatt gaagagactg ggcgcagact ggaagactat gcaaaatctt tcggtgtgcc 360  
 ctttgaatac caggctattg caacaaagtg ggaga 395

<210> 1866  
 <211> 340  
 <212> DNA  
 <213> Pinus radiata

<400> 1866  
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 gaagagttgg ggagtcccca gggatgatga aaatctttgc ttattgaatg tgctaaagct 120  
 attgcagacg gtcgtaatgc agataatttg attgcagggc tgagacaagt tgtaaatata 180  
 tatggggatc cattgcatag gttagctgca tatatggtag aaggctcttg agcaagggtg 240  
 catttctcag gaggacatat ttacaaaacc ctaaaatgca aggagcctac cagttccgaa 300  
 ctcttttctt acatgcatat tctatatgaa gtttgtccct 340

<210> 1867  
 <211> 398  
 <212> DNA  
 <213> Pinus radiata

<400> 1867

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acacatccga	ccaacgggtt	caactgtgcg	gcaacttcgc	gccggtgccg	gaaacgcnaag	180
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gcaatggcgc	naatcccccg	ttcaaaccct	gcggcgcca	ccatttattt	nacggcgatg	300
gaatgataca	tgccgtgacg	ctgagacacg	ggaaggctag	ttacagttgc	cggttcacgg	360
agaccgaaag	gctcgttagc	gaggagcggg	cggggcgg			398

&lt;210&gt; 1868

&lt;211&gt; 200

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1868

aattgcaa	cttgacag	caatcggt	atcaatgaa	agcatctcag	atttatcacc	60
catgtgct	ttctatgag	ggttttt	tgggttagga	gcgcaactg	ttctacttcg	120
gaaaaaata	tggatgcag	gcactttcct	gtaggtttct	ttaggtggga	taagagacca	180
gcaccagttg	tagcggcagc					200

&lt;210&gt; 1869

&lt;211&gt; 286

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1869

ggatagtgca	gagcggctga	acgtggagaa	gcacttcttc	gcagagaaaa	taatggggat	60
tgtagctttt	gagggagccg	aaagaaaaat	cagactggaa	ggaagagatc	agtggcgtat	120
tgtgatggaa	tcagcgggat	tcaaattttac	caattttaagt	cattatgcaa	ggagccaagc	180
tcgaattctt	ctctataatt	attgtgaagc	gtattctcta	gatgaatcgt	cggggtttct	240
ctctttggca	tggcaaaatc	ggccctcct	caccgtcctc	agcctg		286

&lt;210&gt; 1870

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1870

ctatacctcc	gcctcttg	aatttcaggc	tctttcttcc	tgatttttca	gacagtgtac	60
agtcgcgata	ttcacacaag	gccgccatta	tcattctatct	ttcaagaagc	agtagaccaa	120
acaagcaaaa	gcggaaaaac	tatgggaaag	aagaagagg	aggcccccaa	ggctctggtgt	180
tattactgtg	agcgcgagtt	cgntgatgaa	aagatattgg	ttcagcaccn	gaaggccaaa	240
catttcaagt	gccatgtctg	ccacaagaag	ttgtctaccc	gctggaggca	tggccatcca	300
t						301

&lt;210&gt; 1871

&lt;211&gt; 301

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1871

ggctgcacca	ctgtagtaga	aacttttagcc	aagtggcagg	agctgaacag	ccagggtggaa	60
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tgcataaaaag	gaaaggggtg	tcctgataat	ggacgttgca	actatagagg	agtcaggcag	180
agaacgtggg	gaaaatgggt	tgcggaatc	agagaaccga	atcgtggaag	tcgactgtgg	240
ttgggtacgt	tctcttcagc	ggaggaggca	gcacgtgctt	atgatcaggc	tgcgagggtt	300
a						301

&lt;210&gt; 1872

&lt;211&gt; 447

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1872

aagaaaccta	cttggggcaa	gagctcagcc	catgaaactt	tctgctaaaa	atgattcaaa	60
actgggtatt	gcaaggcctg	ccaagctcta	cagaggagt	agacagaggc	actgggggaa	120
atgggtagca	gagatcagat	tacctaggaa	tagaaccagg	ctctggcttg	gaacttttga	180
cacagcagaa	gaagcagcgt	ttgcatatga	cacagcagcc	taccaactac	gtgggtgagta	240
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ccataatgtt	ctttcgccac	cgggtaaatgc	gttatctgtg	ctgaaatctt	ctgttgatgc	360
aaagctccag	gcaatttgcc	agcgtttatc	ccaggaaaat	tcttcagaaa	atcgtctgat	420
ggcacacagt	gccacaatg	aagctct				447

&lt;210&gt; 1873

&lt;211&gt; 311

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1873

gaagatggca	gcaagggtta	caaggccgta	aatccccatc	ccaaaaaggg	cgctgcctcg	60
tggctggtgg	acatggtgga	gaaactggtg	gttgaaactt	ctgcgttgta	tagttcgaag	120
aagcctctgc	attttctttt	ggggaacttc	gctccagtct	cggaaactgc	ccccaaatcg	180
cacctgcctg	ttgttgggca	acttcctagt	tgcttggtatg	gagagttcgt	gcgcgttggt	240
cccaatccga	aattcgcacc	ggtagctggc	tatcactggt	ttgatggaga	tggaatgata	300
catggtctca	g					311

&lt;210&gt; 1874

&lt;211&gt; 383

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1874

ttctcgcccg	ttttttccct	gcactcacca	cttccatcgc	cattgctgga	accctagaag	60
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ctctattgta	tcatagtatt	cagcaagaga	ggccatgggg	cggggaaaga	tcgagctgaa	180
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taaaaaggca	caggagcttt	ccgtcttatg	cgatgcagag	gtcggcgta	tcattttctc	300
taataccggc	agactctacg	acttctcgag	ctccagtatg	gagaagatga	ttgaaacata	360
ctatcgattt	attgaaaaaa	atg				383

&lt;210&gt; 1875

&lt;211&gt; 235

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1875

agagattcag	gggtgtgagg	aggagatcgt	gggggaaatg	ggtagcggag	atcaggatgc	60
tccgatgccg	atcccgcgta	tgggtgggat	cctaccacac	tgcagaacag	gcagctcgtg	120
cctatgatgc	tgctcttttc	tgcttacgag	gtcctgctgc	tttctcctcaac	ttccctgaat	180
ctccacctgc	tcagttttctc	ccatatcccc	tgcgcctct	tcagatatt	catct	235

&lt;210&gt; 1876

&lt;211&gt; 416

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1876

gattgtatga	gatatcagaa	aataaaactg	attttaattc	tgcaggcatc	tcagaaaaaac	60
aaaactggct	ttactttctac	aggcatctca	gaaaataaaa	ctgggttttac	ttctgcacag	120
atgttcagaat	aacaaaactc	gttttacttt	tgcagacatc	tcagacaata	aaacttggtg	180
gttttagtac	ttgcccagac	atctgagaaa	aacaaaacgg	gttttacttc	tgcgcgcgg	240
aagggttttac	aagcttgaat	tcaaaacttta	taatcggggc	ctgtttatat	gtccaacgga	300
aatgtgagg	tcctacacac	gctgacgcgc	gagctcgtcg	ccagttataa	acgtaccatg	360

gaagccgtag ggcacccggg agggcagttt gacggaggcc acgacgtcga ggcccc 416

<210> 1877  
<211> 320  
<212> DNA  
<213> Pinus radiata

<400> 1877

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tgtaatatat	tcagaggtc	atactgcaca	gctttgctta	gtctgtgatg	ctaaaattca	180
tgggtggtagc	aaggcttcgt	tgtgtcatga	aagagtttgg	gtttgtgaag	natgtgagca	240
ggccccagct	gtggttacat	gcaaggcaga	tgcagcagct	ttatgtgtag	cctgtgatac	300
tgatattcat	tctgccaatc					320

<210> 1878  
<211> 456  
<212> DNA  
<213> Pinus radiata

<400> 1878

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tgggggagct	gggcatctga	aatccggata	ccgagatcca	gaaagaagat	atggcttggc	240
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cgtgagcaaa	ttcagcatgc	cgcgcgcgaa	tatgcgttga	gccaggcccc	ttcgagtttg	420
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<210> 1879  
<211> 491  
<212> DNA  
<213> Pinus radiata

<400> 1879

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aaggctagtt	acagttgccg	gttcacggag	accgaaaggc	tcgttagcga	ggagcggggc	180
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<210> 1880  
<211> 310  
<212> DNA  
<213> Pinus radiata

<400> 1880

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ccttaccac	atcttcgcca	ttatcgggtc	accttgcccc	cttcacctcc	tcctcttccc	180
ccacctccac	cacctcctcc	tccattgtct	ctcaccctct	ctcctagtta	tggatctgca	240
acttttctct	ccagcatccc	agtcfaatcga	agcatctaca	gatgtccgta	tcagcaatgc	300
tcaccatcat						310

<210> 1881  
<211> 251



&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1881

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atctctgctc	cggctgacgac	gtcaaagttc	acggcgccaa	caagctggcg	tcgcgccacg	240
agaggggtgtg	g					251

&lt;210&gt; 1882

&lt;211&gt; 351

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1882

cacgagggcc	agagctgtgg	ctgttcccag	aagaggatat	catcagctgt	ccagtttgtc	60
ctaagagact	acagaagaag	aatatagaag	atgggtagat	ccccttgccc	cccaaaagaa	120
gcgcttaacc	gtggggcttg	gacaggcatg	gaggatacga	ttctcaccga	gtacattcga	180
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aattcatcag	tcatatatat	cagaaattta	tagtcgagtc	taagaggag	a	351

&lt;210&gt; 1883

&lt;211&gt; 450

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1883

tcccttatca	cagaatagaa	actgatggct	agtcagatcc	cagaatgaac	cctctaaatt	60
aaatgtagcc	cgcttagaac	attagaagaa	gcaaaagcaa	acattcatga	tcaataaatg	120
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atttgcctcta	tgaacagaat	taccgagctt				450

&lt;210&gt; 1884

&lt;211&gt; 386

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1884

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tgaatctcga	gagtacttct	agagcgggcg	cgggcccac	gattttccac	ccgggtgggg	360
taccaggtaa	gtgtacccaa	ttcgcc				386

&lt;210&gt; 1885

&lt;211&gt; 190

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1885

aaatgatcag	aggcggttct	ccagttattc	acaacaaaga	aaagggtccc	cgcttcgggc	60
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tctgctttca	tctctggaac	gcctgggaag	aaggagaaga	cgaggttgct	gtcatcggtc	180

cctgtatgac 190

<210> 1886  
 <211> 412  
 <212> DNA  
 <213> Pinus radiata

<400> 1886  
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 agaagacgag gttgtcgtca tcggctcctg tatgaccccg ccggacgcca ttttcaacga 180  
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 gtccaccaga cgcgagatca cgccgatgaa tctcgagagt acttctagag cggccgcggg 300  
 cccatcgatt ttccacccgg gtgggggtacc aggttaagtgt acccaattcg ccctatacgt 360  
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<210> 1887  
 <211> 329  
 <212> DNA  
 <213> Pinus radiata

<400> 1887  
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 ctttcatctc tggaacgcct gggaagaagg agaagacgag gttgtcgtca tcggctcctg 180  
 tatgaccccg ccggacgcca ttttcaacga atctgacagc gcgctgcgga gtgttctgtc 240  
 ggaaattcgg ctcaatctca aaaccggctt gtccaccaga cgcgagatca cgccgatgaa 300  
 tctcgagagt acttctagaa gcgcccggc 329

<210> 1888  
 <211> 101  
 <212> DNA  
 <213> Pinus radiata

<400> 1888  
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<210> 1889  
 <211> 326  
 <212> DNA  
 <213> Pinus radiata

<400> 1889  
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 tgctttcatc tctggaacgc ctgggaagaa ggagaagacg aggttgtcgt catcggtctc 180  
 tgtatgaccc cgctggacgc cattttcaac gaatctgaca gcgcgctgcg gagtgttctg 240  
 tcggaaattc ggctcaatct caaaaccggc ttgtccacca gacgcgagat cacgccgatg 300  
 aatctcgaga gtacttctag agcgg 326

<210> 1890  
 <211> 246  
 <212> DNA  
 <213> Pinus radiata

<400> 1890  
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 acgaatctga cagcgcgctg cggagtgttc tgtcggaaat tcggctcaat ctcaaaaccg 180  
 gcttgtccac cagacgcgag atcacgccga tgaatctcga gactacttct agagcggccg 240

cggggc 246

<210> 1891  
 <211> 238  
 <212> DNA  
 <213> Pinus radiata

<400> 1891  
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 tctgctttca tctctggaac gcctgggaag aaggagaaga cgaggttgtc gtcacgggt 180  
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<210> 1892  
 <211> 349  
 <212> DNA  
 <213> Pinus radiata

<400> 1892  
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 atgccgatat tgttgtaggg ttttcccgac gtctcaggct ctccggcgcc accagaacgc 180  
 ccataaacga gaacggcgcc gggcaatgac gaggtttcag agatcgccct ctgacagttc 240  
 aaactattca ggaaaacaga atagtattga tctgtttagc cgtgagagag ttcccgggtc 300  
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<210> 1893  
 <211> 417  
 <212> DNA  
 <213> Pinus radiata

<400> 1893  
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<210> 1894  
 <211> 456  
 <212> DNA  
 <213> Pinus radiata

<400> 1894  
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 ctacagaggc gtcacaaggc atagatggac aggacgatat gaagctcatc tttgggacaa 180  
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 ttcaaggga gatttcctgg cttctctcag acggaaaagt agtgggtttt caaggggaat 420  
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<210> 1895  
 <211> 456  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1895

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ctacagaggg	gtcacaaagg	atagatggac	aggacgatat	gaagctcatc	tttgggacaa	180
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ttcaagggaa	gatttcctgg	cttctctcag	acggaaaagt	agtgggtttt	caaggggaat	420
gtcaaaaatac	cgtggactgc	caagcaatca	caaact			456

&lt;210&gt; 1896

&lt;211&gt; 388

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1896

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cttttgectc	ttcagtaagt	atagcaaata	attcccagat	gcctggttta	gggtcaagag	180
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ctgctaacca	tatatctccg	gatgtaatct	ctaggaacac	gatggattcg	tcttcactct	360
caccagttcc	ttatccggtt	ggccgggg				388

&lt;210&gt; 1897

&lt;211&gt; 202

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1897

atgcgaaaca	tgctcaaaca	cccccaacat	catgggaagg	tggaagtggg	gctgattcgg	60
aggttaacat	gttgaaggat	tacgtttcag	aggactggat	tacaggtggt	gaccgcttcc	120
ggttgagctt	ggttgaattt	cttgataagt	tgaataagta	tgcggagtcc	tctgttcata	180
tgtacgtgtc	ccttgaaaag	gc				202

&lt;210&gt; 1898

&lt;211&gt; 289

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1898

gttgaatggg	gattcaaaca	atggcttcac	aaggcggcgg	cggcagcagc	ggtaatgcc	60
gaggtggcgg	tggcaataat	ggaaaatcca	ctgaagtcca	gccattgact	cggcagaatt	120
caatatacag	tctcactctt	gatgaggttc	aaaaccagtt	aggtgattta	gggaagccat	180
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caatgtttat	ggatgttgag	ggcacggctg	tggctaataca	aaatgctct		289

&lt;210&gt; 1899

&lt;211&gt; 477

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1899

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gtgaagtacc	agctcaaccc	cggctcactc	actgaatcag	atgattcaaa	gagcctctgc	180
tccactctgg	acaagctctt	ggcttgggag	aagaagctct	atgaggaagt	gaaggctaga	240
gaaggtgaga	agatagagca	tgaaaagaag	ttgtcagtac	ttcagagcca	ggaaggcaag	300
ggagaagatg	aaaccaaggt	agacaagacc	aaggcctcat	taaataagtt	gcaagcacta	360
atagctgtta	cgtcggaggc	tgtctctaca	acttcaaagt	caattattgg	cctcagagac	420
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<210> 1900  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 1900  
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 gtgctcgttg ctattccgctc cgctcgatagg aggctaggct acgctgaaag aagttgatga 180  
 gcgcgaatttc actgatggag tggaatgcga aacctcctct gcagtgaggaa tgggagaatc 240  
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 attaccaccg caagcataga gtttgtgaga gtcactctaa atgccctaag gtcacgtcga 840  
 gtgggtataga gcgtcgggtt tgtagcgaat gcagcaggtt tcatgggcta tctgagtttg 900  
 atgaaaagaa gcgtagctgt cgcaagcgcc tatctgatca caatgcaaga cgtcgcaagc 960  
 ccccgccaga tgtgacccag ttgaatccgg ctgactgtc tgcactgttt tatgggtggga 1020  
 tgcagcagtt gaatccagtc ttgagcagag ctccagctat ccacaccagg tctactgcta 1080  
 gtttttaaatg ggcagataca caggacacta agctcataga gaaaggtccg aagcttccaa 1140  
 taggcggagg tgttggtgag tgtatcacta tcccaagcaa tgggataccg gacaccctca 1200  
 agtccactgg attgggcaaa agctataacg aacttctatc atc 1243

<210> 1901  
 <211> 366  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1901  
 aaaaagtata tatacctcgg cctattttgat agtgaagtag aggcagcaag ggcgtatgac 60  
 aaggcagcta tcaaatgtaa tggaagagag gctgtgacca actttgaacc tagtacgtac 120  
 gatggagaga tgattgcaa agccagcaat gaaaatagca tctatggtga ccatggtctt 180  
 gatctcaatc tcgggatatc agcttcttcc aggggaatgg tggaaacctt agagccctcg 240  
 gacgacatgc gtcaggggaag tagtttaagg gtaggaaact ctgctgcata ctgggggtgat 300  
 ccactctgtt aaggtttatc gatgacatct ggacaacctc tccttgacgg gtgtttatcc 360  
 taccgt 366

<210> 1902  
 <211> 466  
 <212> DNA  
 <213> Pinus radiata

<400> 1902  
 ttaattcatg gcggcgggcg gcagcactac gttgggttgt gcgaagggtg atttgatacg 60  
 gctcatgcgg ctgcgagagc ttacgacagg gcagctatca agtttcgagg agttgaagct 120  
 gatataaatt ttactctcac cgactatcaa gaagatttag accagacgag caagctctct 180  
 aaagaagagt ttgtgcatat tctccgtcgt caaagtactg gtttctctcg tggaagtcc 240  
 aagtatagag gcgttaccct gcacaagtgt gggcgatggg aagccagaat gggtaattc 300  
 ctaggaaaaa agtatatata tttgggatta tttgacagtg aagaggaggc tgcaagggca 360  
 tatgataagg ctgctatcag gtgcaatgga aaggaggcag taacgaactt tgatcctagc 420  
 ttatatgaaa aagaaattct tgaagaaaga agagagagtc agactt 466

<210> 1903  
 <211> 240  
 <212> DNA  
 <213> Pinus radiata

<400> 1903  
 gcttattgga atgcctgaca ctaactatgg aagcgaacag acaaatgctt gcaaaaaaca 60  
 gaaaagaata cgttccaagg attcaggaga agatggtgaa gatagacaga gagaacatcc 120  
 tttcattggt actgagcccg gtgaacttgc aagagggaaa aagaatgggt tagactatct 180  
 ctttgatctt tatgaacagt gcgggaaatt tctgctggat gtgcaacata ttgcaagga 240

<210> 1904  
 <211> 495  
 <212> DNA  
 <213> Pinus radiata

<400> 1904  
 gccatggcaa tagattttgc aggacgggaa tctcctcgtg tgcaggctcg cagatacccc 60  
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 ataagggttg tgaattgcac tcgaaggcct ctactgttat tgtgggtggg ttcatcagc 180  
 ggttctgcca acaatgtagc agatttcacg caagatctga attcgacgag ggaaaacgaa 240  
 gctgcagaaa gcgccttgct gaccacaaca gacgaaggag aaaacctcag ccaagtacat 300  
 gtgttacatc acaatctcag gctgggacaa caggtttaga aaatgataac cagacaacta 360  
 aaggatcatc aggtcacatt acaacggctg ttcagaatac accgaacatt agcagaagca 420  
 ctagtagtac tagtccgtcc ttgattacat cagtaccgat gatgatgttc ccaataact 480  
 ataaaggaca tagtc 495

<210> 1905  
 <211> 377  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1905  
 taacactaca ttcacacccc caaacagcaa acggatcatc tcgcacaatc catcaagtgt 60  
 agatcgaccg gcggaatctg cagcactggc aaagaggatg aggagggctc acattcagaa 120  
 tatagcggga gattgcaact tgaaagacag attacatata caaagtggaa tcacatatag 180  
 tcagcaacaa agagctccct tttccacatt ggcgacagaa ttccgcacta gcaattcgcc 240  
 cccccagcaa tctgaaagca accaaaaaga agccaccgat gatgctcatg gcaccaacgt 300  
 ccaaggaaaca tttcttaaaa aggatgatcc aaaagtact gctctgattc aacaagccga 360  
 gctgctcagt tccttgc 377

<210> 1906  
 <211> 377  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1906  
 gtgatttttag tgctcgatac tttgaaaagg gcatcaatac agtcaaacga gataaaaaaga 60  
 cataacatgc aaaactcaat acatgattct cagaaaaagac catcatcttt aattcagtca 120  
 aacgaggctg tttttacgca aacttcggtc ataagctgtg ccttgcaatc gtttgtaaaa 180  
 cctccaaatg ctaaggtcac gggtcacattc ctctctgatc tttgagcagc tcatggcacc 240  
 aacgtccaag gaacatttct taaaaaggat gatccaaaag ttactgctct gattcaacaa 300  
 gccgagctgc tcagttccct tgcggtgaaa gtcaatgcag ataacatgga ccagagtctt 360  
 gaaaatgctt ggaagg 377

<210> 1907  
 <211> 1668  
 <212> DNA  
 <213> Pinus radiata

<400> 1907  
 agctgtaagc tacctacgaa gtggaatcga agagagagag agtgagaggc taactaataa 60  
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 cggcgccgtg aaagtggcga ttccggccgt gtcgggggat tcggggacga ttgggttaaa 180  
 gctgggcaag cggacctatt ttgaggcggt gaaggcaatt ccgacagcga tcccccgcc 240

gtcttgcgtt	ccggctgcc	agaagcagca	gtctgcgtt	cagggaaacgc	atatggtgcc	300
gcggtgtcag	gtggaggat	gcgagatgga	actcaccgcc	gcaaaggact	accaccgccg	360
ccacaaggtc	tgcgagctcc	actccaagtt	tcccaaggtc	atcgtaacg	ggatcgagca	420
gcgcttctgt	cagcaatgta	gcaggtttca	tacgttgtct	gagtttgatg	aagggaagcg	480
gagctgtcgg	aggcgtctag	ctggccacaa	ccagcggcgt	aggaaacccc	aacttaattc	540
aacggcgatg	aaagctgcaa	gatttgcctc	cactttctat	gatgacgggc	gacttagcag	600
catcctgatg	gctagatcac	ctttcatgca	tccacggata	gcttcaaact	tggaggagaa	660
ttcgctcgat	ttcaaacttg	gaggatatgg	aaaaggagct	tggccgagga	ttaaggctga	720
ggatgtatca	tcatatgatg	ggcaattatc	aaccaaatac	cctctcccgt	cataatgctg	780
aaagattgct	tttcctttta	cagggttcta	agactgtacc	tgggtggagct	attaatcaaa	840
gcactcatca	gtacaggcaa	agctccaggg	atcatgtggg	ccaatccttg	accttgtcat	900
cctgctcggg	agaaaatcta	acaggtttaa	atgttatatg	tgccccacat	ggtttatcag	960
gagctctcga	ctctggctgt	gcgcactagc	ttctgtcaat	tcaatccggg	ggcccaaggt	1020
cctcaggatc	agcttcattt	gatatgacca	cgcggtcagg	tctcacaatg	gatcaactta	1080
tactagagga	tcaacctctt	atggctcaag	caccattgat	gcaaggagta	caacacaact	1140
ttggtcattt	tgcagaagac	aagttactaa	caatgtatcc	ccagtctctt	actaatcttg	1200
caacagggtg	gttccttgca	gctactgtga	attctatgga	taagcagcac	caaggctatc	1260
cactcgtttc	cgatgcaggc	caaatggtaa	actttggagg	aaatatattt	ggcttgctgc	1320
aggggagcag	tttcagaggc	tctcaagctg	caagttcaca	agatattcaa	ggcaccatag	1380
atctgatgtg	cacgtcctcg	gaaacacaaa	ctaagtattc	tcatgatcaa	cttggcatgg	1440
tgcaccaggg	aagtaaacag	tttactgact	tgcagttggt	gaggtctttt	gaatcatcta	1500
tttatgacac	tcatcaactg	ctgtagctct	aatctggttg	ttcttcgggc	atgttttctt	1560
tgccttcaga	cttgaagata	actgttaaaa	cttcattatg	acaattatct	gtaccctcta	1620
aatgcagaca	attgctttca	attacccttg	cttattttcaa	aaaaaaaa		1668

&lt;210&gt; 1908

&lt;211&gt; 821

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1908

ctctctctct	ctctctctct	ctctttcttt	ctttctttct	ctctctagca	gaggcacaga	60
ggcgcgca	gggcactgat	gatgacgact	gggtagctc	caatgaatgg	gctctagaga	120
acctcgctca	tggacgtggg	ttcgggctcg	tggacgacgg	agtcggggtc	ctcttctcct	180
ccccctctcg	agtcctctca	cggcctcaag	ttcgccaga	aaatctactt	ccagaataat	240
aacagtagta	ataatgccgc	cgcacccaag	aacggctccg	gctccgggtc	cggctcctcc	300
tccgccgcgc	cgcccgcgcc	cgggtcgggc	acgccccga	agaaggtag	ggcctccgcc	360
ggcgggcgcg	gctgcggggc	gatccagggc	gggcagcccc	cgagggtgcca	ggtggaaggc	420
tgcggggtgg	atctgagcga	tgccaaggct	tactattcca	ggcacaagg	gtgcggcatg	480
cactccaagt	ccgccaccgt	categtcgcc	ggcatcgagc	agagggttctg	ccagcagtgc	540
agcagattcc	atcagcttac	tgaatttgac	caagggaac	gaagctgtcg	tagacgtttg	600
gctggtcaca	atgagcgccg	gaggaagccc	ccacctgggt	cgctactatc	ctctcgctat	660
gggcgactgc	aatcctctat	atctgagaac	accaccagag	tgggtagttt	tctgatggat	720
ttcacagcat	accgaagca	tgcattggtc	gcgccacgtt	tttctgagcg	cacgacacct	780
ggagatctag	tccccggacc	aggaaaggtc	tatcctcatc	c		821

&lt;210&gt; 1909

&lt;211&gt; 105

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1909

gggaagagga	gcgtagagtg	ggattcgaac	gattggaagt	gggacgggtg	tctgttcgtc	60
gctaggccgc	tgaaccgggt	ccgctccgat	ttccccggcc	ggcag		105

&lt;210&gt; 1910

&lt;211&gt; 338

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1910

cagaagagac	ctgccatgga	aacacatttt	gcaggacaga	aatttcatca	ttcacaggct	60
cacagatacc	ccagtgccag	tccgagggtt	gtaaagcaaa	cttgagcagt	gccaaacact	120
accatcgccg	acataaagtt	tgcgaattcc	actctaaggc	tcttacggtc	gttggtggcg	180
gtcagattca	gcggttttgc	caacagtgtg	gtagatttca	tcagacatct	gaatttgacg	240
gaggaaagcg	gagctgcaga	aagcgccttg	ctgaccacaa	cagacgccgg	cggaaaccta	300
aaccgagtc	atgtactaca	tcccaatgtc	aggcaggg			338

<210> 1911  
 <211> 465  
 <212> DNA  
 <213> Pinus radiata

<400> 1911						
tgcacatggg	cctttgcatt	ttcttgaaga	agctgtgatt	gttcgaccga	cacgttactc	60
attcacattg	cctctccatc	tccttcaatc	aggattccag	aattgcccgt	cgaaatggat	120
gaagtccaag	tcaaggtcga	cattcagagc	acaaatgtca	gtgccgacga	gcccaggcct	180
gcgaagcgcc	agggtttcga	gctcgccaag	agccctgaaa	acgtggcttc	gaaatccact	240
gcgctctcct	ctccgaaaaa	acccaaagct	gcttcttctc	cttcttcttc	gtcgccgaga	300
gcgcagcctc	ccgcttgcca	gggtggagaaa	tgcgcggcgg	atcttgctga	tgccaaagag	360
tactatagga	ggcacagggt	ttgcgagcaa	cattcaaagg	ctcgaattgt	gctcgttctt	420
ggcctccagc	aacgcttctg	ccagcaatgt	agcagattcc	atgtg		465

<210> 1912  
 <211> 509  
 <212> DNA  
 <213> Pinus radiata

<400> 1912						
ctccttacaa	aagtagctcc	cctcttgact	ccaggcggtc	ttcccagtc	ataacgatac	60
ggattacacc	cacgcacccc	atgtcttcca	cctcatcgta	ttcttctccc	ttccctgaca	120
caccatcaca	gtctgccgct	gtgcgcccga	catctaccgc	agacgattct	tcgctcatgg	180
aacctccacg	taagcgagcc	agggctgatc	ttaacgctga	acagcgaaga	gaggccaggg	240
cccaccgtaa	tcgaattgcc	gctcaaaaact	ctcgcgataa	acgcaaggcg	caattcactt	300
acatggagca	gcgcgtggca	caactggagg	aagagaacca	acgactacga	gcaggcatgg	360
gcctctctca	attcacgcca	gccgacaacg	acaagttcgt	cagcctcgag	agagaatcag	420
tacaggcccg	cgagaacaga	gagctcaagg	agaggatcaa	gagtcctagag	agcgggtggg	480
cggccgtcat	caaagcggtg	caggcctca				509

<210> 1913  
 <211> 151  
 <212> PRT  
 <213> Pinus radiata

<400> 1913	
Glu Gly Asn Glu Ser Asp Leu Leu Lys Gly Met Lys Lys Ala Arg Arg	
1 5 10 15	
Glu Arg Gly Ser Thr Ala Lys Glu Arg Ile Ser Lys Met Pro Pro Cys	
20 25 30	
Ala Ala Gly Lys Arg Ser Ser Ile Tyr Arg Gly Val Thr Arg His Arg	
35 40 45	
Trp Thr Gly Arg Tyr Glu Ala His Leu Trp Asp Lys Ser Thr Trp Asn	
50 55 60	
Gln Asn Gln Asn Lys Lys Gly Lys Gln Val Tyr Leu Gly Ala Tyr Asp	
65 70 75 80	
Glu Glu Glu Ala Ala Ala Arg Ala Tyr Asp Leu Ala Ala Leu Lys Tyr	
85 90 95	
Trp Gly Pro Gly Thr Leu Ile Asn Phe Pro Val Ser Asp Tyr Ala Arg	
100 105 110	
Asp Ile Glu Glu Met Gln Ser Ile Ser Arg Glu Asp Phe Leu Ala Ser	
115 120 125	
Leu Arg Arg Lys Ser Ser Gly Phe Ser Arg Gly Met Ser Lys Tyr Arg	



130 135 140  
 Gly Leu Pro Ser Asn His Lys  
 145 150

<210> 1914  
 <211> 128  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 1914  
 Lys Ser Ile Pro Gly Gln His Pro Asn Leu Ala Phe Asn Val Gly Ser  
 1 5 10 15  
 Ile Arg Ser Asn Gln Gln Gln Leu Gln Gln Gln His Asp Leu Pro Leu  
 20 25 30  
 Leu Pro Lys Pro Ala Thr Met Pro Phe Ala Ser Ser Val Ser Ile Ala  
 35 40 45  
 Asn Asn Ser Gln Met Pro Gly Leu Gly Ser Arg Gly Val Ile Arg Met  
 50 55 60  
 Thr Asp Ala Ser Ile Lys Ser Ser Leu Ala Gln Gly Gly Gly Leu Gln  
 65 70 75 80  
 Thr Gly Val Gly Met Thr Gly Leu Asp Thr Arg Gly Val Ala Leu Gln  
 85 90 95  
 Thr Val Ser Pro Ala Asn His Ile Ser Pro Asp Val Ile Ser Arg Asn  
 100 105 110  
 Thr Met Asp Ser Ser Ser Leu Ser Pro Val Pro Tyr Pro Phe Gly Arg  
 115 120 125

<210> 1915  
 <211> 66  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 1915  
 Ala Lys His Ala Gln Thr Pro Pro Thr Ser Trp Glu Gly Gly Ser Gly  
 1 5 10 15  
 Ala Asp Ser Glu Val Asn Met Leu Lys Asp Tyr Ala Ser Glu Asp Trp  
 20 25 30  
 Ile Thr Gly Val Asp Arg Phe Arg Leu Ser Leu Val Glu Phe Leu Asp  
 35 40 45  
 Lys Leu Asn Lys Tyr Ala Glu Ser Ser Val His Met Tyr Val Ser Leu  
 50 55 60  
 Glu Lys  
 65

<210> 1916  
 <211> 89  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 1916  
 Met Ala Ser Gln Gly Gly Gly Gly Ser Ser Gly Asn Ala Arg Gly Gly  
 1 5 10 15  
 Gly Gly Asn Asn Gly Lys Ser Thr Glu Val Gln Pro Leu Thr Arg Gln  
 20 25 30  
 Asn Ser Ile Tyr Ser Leu Thr Leu Asp Glu Val Gln Asn Gln Leu Gly  
 35 40 45  
 Asp Leu Gly Lys Pro Leu Ser Ser Met Asn Leu Asp Glu Leu Leu Lys  
 50 55 60  
 Asn Val Trp Thr Ala Glu Ala Gly Gln Ser Met Phe Met Asp Val Glu  
 65 70 75 80  
 Gly Thr Ala Val Ala Asn Gln Asn Ala

85

<210> 1917  
 <211> 159  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 1917  
 Leu Glu Ile Gly Arg Ala Gln Leu Asp Arg Ser Phe Lys Gln Leu Lys  
 1 5 10 15  
 Lys Thr Val Tyr His Ser Thr Ser Val Leu Ser Thr Leu Ser Ser Ser  
 20 25 30  
 Trp Ser Ser Lys Pro Pro Leu Ala Val Lys Tyr Gln Leu Asn Pro Gly  
 35 40 45  
 Ser Leu Thr Glu Ser Asp Asp Ser Lys Ser Leu Cys Ser Thr Leu Asp  
 50 55 60  
 Lys Leu Leu Ala Trp Glu Lys Lys Leu Tyr Glu Glu Val Lys Ala Arg  
 65 70 75 80  
 Glu Gly Glu Lys Ile Glu His Glu Lys Lys Leu Ser Val Leu Gln Ser  
 85 90 95  
 Gln Glu Gly Lys Gly Glu Asp Glu Thr Lys Val Asp Lys Thr Lys Ala  
 100 105 110  
 Ser Leu Asn Lys Leu Gln Ala Leu Ile Ala Val Thr Ser Glu Ala Val  
 115 120 125  
 Ser Thr Thr Ser Asn Ala Ile Ile Gly Leu Arg Asp Ser Arg Leu Val  
 130 135 140  
 Pro Gln Leu Val Glu Leu Cys His Gly Phe Met Tyr Met Trp Arg  
 145 150 155

<210> 1918  
 <211> 349  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 1918  
 Met Glu Trp Asn Ala Lys Pro Pro Leu Gln Trp Glu Trp Glu Asn Leu  
 1 5 10 15  
 Met Met Phe Gly Ser Lys Ala Thr Glu Thr Ser Lys Pro Leu Arg Ala  
 20 25 30  
 Thr Asp Trp Gly Ile Glu Ala Glu Glu Leu Ile Asp Pro Gly Ser Leu  
 35 40 45  
 Phe Leu Tyr Glu Asn Gly Gly Gly Ser Ser Ser Cys Thr Ser Ile Asp  
 50 55 60  
 Pro Gly Tyr Thr Ser Val Ser Lys Ser Ser Lys Ser Ala Ser Val Asn  
 65 70 75 80  
 Ser Ser Ser Thr Asp Glu Leu Lys Ile Ser Lys Phe Ser Val Glu Ala  
 85 90 95  
 His Glu Gly Phe Ser Leu Gln Ser Ser Lys Lys Glu Leu Ala Val Asn  
 100 105 110  
 Asp Phe Thr Gly Met Ser Pro Ala Leu Glu Pro Ser Val Cys Ser Gly  
 115 120 125  
 Glu Pro Leu Leu Ser Leu Lys Leu Gly Lys Arg Ile Tyr Phe Glu Asn  
 130 135 140  
 Thr Ile Asp Lys Asp His Val Lys Thr Gln Asp Leu Pro Ser Val Met  
 145 150 155 160  
 Lys Ser Pro Asp Thr Pro Ala Lys Arg Asn Lys Ser Asn Cys Gln Gly  
 165 170 175  
 Thr Ser Ala Pro Arg Cys Gln Val Glu Gly Cys Asn Leu Asp Leu Ser  
 180 185 190  
 Ser Ala Lys Asp Tyr His Arg Lys His Arg Val Cys Glu Ser His Ser  
 195 200 205

Lys Cys Pro Lys Val Ile Val Ser Gly Ile Glu Arg Arg Phe Cys Gln  
 210 215 220  
 Gln Cys Ser Arg Phe His Gly Leu Ser Glu Phe Asp Glu Lys Lys Arg  
 225 230 235 240  
 Ser Cys Arg Lys Arg Leu Ser Asp His Asn Ala Arg Arg Arg Lys Pro  
 245 250 255  
 Pro Pro Asp Val Thr Gln Leu Asn Pro Ala Arg Leu Ser Ala Leu Phe  
 260 265 270  
 Tyr Gly Gly Met Gln Gln Leu Asn Pro Val Leu Ser Arg Ala Pro Ala  
 275 280 285  
 Ile His Thr Arg Ser Thr Ala Ser Phe Lys Trp Ala Asp Thr Gln Asp  
 290 295 300  
 Thr Lys Leu Ile Glu Lys Gly Pro Lys Leu Pro Ile Gly Gly Gly Val  
 305 310 315 320  
 Gly Glu Cys Ile Thr Ile Pro Ser Asn Gly Ile Pro Asp Thr Leu Lys  
 325 330 335  
 Ser Thr Gly Leu Gly Lys Ser Tyr Asn Glu Leu Leu Ser  
 340 345

<210> 1919  
 <211> 122  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 1919  
 Lys Lys Tyr Ile Tyr Leu Gly Leu Phe Asp Ser Glu Val Glu Ala Ala  
 1 5 10 15  
 Arg Ala Tyr Asp Lys Ala Ala Ile Lys Cys Asn Gly Arg Glu Ala Val  
 20 25 30  
 Thr Asn Phe Glu Pro Ser Thr Tyr Asp Gly Glu Met Ile Ala Lys Ala  
 35 40 45  
 Ser Asn Glu Asn Ser Ile Tyr Gly Asp His Gly Leu Asp Leu Asn Leu  
 50 55 60  
 Gly Ile Ser Ala Ser Ser Arg Gly Met Val Glu Thr Leu Glu Pro Ser  
 65 70 75 80  
 Asp Asp Met Arg Gln Gly Ser Ser Leu Arg Val Gly Asn Ser Ala Ala  
 85 90 95  
 Ser Trp Gly Asp Pro Ser Val Glu Gly Leu Ser Met Thr Ser Gly Gln  
 100 105 110  
 Pro Leu Leu Asp Gly Cys Leu Ser Tyr Arg  
 115 120

<210> 1920  
 <211> 155  
 <212> PRT  
 <213> Pinus radiata

<400> 1920  
 Leu Ile His Gly Gly Gly Gly Asp Asp Tyr Val Gly Leu Cys Glu Gly  
 1 5 10 15  
 Gly Phe Asp Thr Ala His Ala Ala Ala Arg Ala Tyr Asp Arg Ala Ala  
 20 25 30  
 Ile Lys Phe Arg Gly Val Glu Ala Asp Ile Asn Phe Thr Leu Thr Asp  
 35 40 45  
 Tyr Gln Glu Asp Leu Asp Gln Thr Ser Lys Leu Ser Lys Glu Glu Phe  
 50 55 60  
 Val His Ile Leu Arg Arg Gln Ser Thr Gly Phe Ser Arg Gly Ser Ser  
 65 70 75 80  
 Lys Tyr Arg Gly Val Thr Leu His Lys Cys Gly Arg Trp Glu Ala Arg  
 85 90 95  
 Met Gly Gln Phe Leu Gly Lys Lys Tyr Ile Tyr Leu Gly Leu Phe Asp

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          100          105          110
Ser Glu Glu Glu Ala Ala Arg Ala Tyr Asp Lys Ala Ala Ile Arg Cys
          115          120          125
Asn Gly Lys Glu Ala Val Thr Asn Phe Asp Pro Ser Leu Tyr Glu Lys
          130          135          140
Glu Ile Leu Glu Glu Arg Arg Glu Ser Gln Thr
145          150          155

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<210> 1921  
 <211> 79  
 <212> PRT  
 <213> Pinus radiata

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    <400> 1921
Leu Ile Gly Met Pro Asp Thr Asn Tyr Gly Ser Glu Gln Thr Asn Ala
 1          5          10          15
Cys Lys Lys Gln Lys Arg Ile Arg Ser Lys Asp Ser Gly Glu Asp Gly
          20          25          30
Glu Asp Arg Gln Arg Glu His Pro Phe Ile Val Thr Glu Pro Gly Glu
          35          40          45
Leu Ala Arg Gly Lys Lys Asn Gly Leu Asp Tyr Leu Phe Asp Leu Tyr
          50          55          60
Glu Gln Cys Gly Lys Phe Leu Leu Asp Val Gln His Ile Ala Lys
65          70          75

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<210> 1922  
 <211> 164  
 <212> PRT  
 <213> Pinus radiata

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    <400> 1922
His Gly Asn Arg Phe Cys Arg Thr Gly Ile Ser Ser Cys Ala Gly Ser
 1          5          10          15
Gln Ile Pro His Cys Gln Ala Glu Gly Cys Lys Ala Asn Leu Ser Ser
          20          25          30
Ala Lys His Tyr His Arg Arg His Lys Val Cys Glu Leu His Ser Lys
          35          40          45
Ala Ser Thr Val Ile Val Gly Gly Phe Ile Gln Arg Phe Cys Gln Gln
          50          55          60
Cys Ser Arg Phe His Pro Arg Ser Glu Phe Asp Glu Gly Lys Arg Ser
65          70          75          80
Cys Arg Lys Arg Leu Ala Asp His Asn Arg Arg Arg Arg Lys Pro Gln
          85          90          95
Pro Ser Thr Cys Val Thr Ser Gln Ser Gln Ala Gly Thr Thr Gly Leu
          100          105          110
Glu Asn Asp Asn Gln Thr Thr Lys Gly Ser Ser Gly His Ile Thr Thr
          115          120          125
Ala Val Gln Asn Thr Pro Asn Ile Ser Arg Ser Thr Ser Ser Thr Ser
          130          135          140
Pro Ser Leu Ile Thr Ser Val Pro Met Met Met Phe Pro Asn Asn Tyr
145          150          155          160
Lys Gly His Ser

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<210> 1923  
 <211> 125  
 <212> PRT  
 <213> Eucalyptus grandis

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    <400> 1923
Asn Thr Thr Phe Ile Thr Pro Asn Ser Lys Arg Ile Ile Ser His Asn

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1	5	10	15
Pro Ser Ser Val Asp Arg Pro Ala Glu Ser Ala Ala Leu Ala Lys Arg			
20	25	30	
Met Arg Arg Ala His Ile Gln Asn Ile Ala Gly Asp Cys Asn Leu Lys			
35	40	45	
Asp Arg Leu His Ile Gln Ser Gly Ile Thr Tyr Ser Gln Gln Arg			
50	55	60	
Ala Pro Phe Ser Thr Leu Ala Gln Asn Phe Arg Thr Ser Asn Ser Pro			
65	70	75	80
Pro Gln Gln Ser Glu Ser Asn Gln Lys Glu Ala Thr Asp Asp Ala His			
85	90	95	
Gly Thr Asn Val Gln Gly Thr Phe Leu Lys Lys Asp Asp Pro Lys Val			
100	105	110	
Thr Ala Leu Ile Gln Gln Ala Glu Leu Leu Ser Ser Leu			
115	120	125	

<210> 1924  
 <211> 50  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 1924

Ala Ala His Gly Thr Asn Val Gln Gly Thr Phe Leu Lys Lys Asp Asp	
1	5
Pro Lys Val Thr Ala Leu Ile Gln Gln Ala Glu Leu Leu Ser Ser Leu	
20	25
Ala Val Lys Val Asn Ala Asp Asn Met Asp Gln Ser Leu Glu Asn Ala	
35	40
Trp Lys	
50	

<210> 1925  
 <211> 257  
 <212> PRT  
 <213> Pinus radiata

<400> 1925

Ala Val Ser Tyr Leu Arg Ser Gly Ile Glu Glu Arg Glu Ser Glu Arg	
1	5
Leu Thr Asn Lys Met Asn Met Lys Ile Arg Thr Ser Asp Thr Ser Thr	
20	25
Pro Asp Asp Gln Gln Gln His Ser Gly Ala Val Lys Val Ala Ile Pro	
35	40
Ala Val Ser Gly Asp Ser Gly Thr Ile Gly Leu Lys Leu Gly Lys Arg	
50	55
Thr Tyr Phe Glu Ala Val Lys Ala Ile Pro Thr Ala Ile Pro Ser Pro	
65	70
Ser Cys Val Pro Ala Ala Lys Lys Gln Gln Ser Ala Leu Gln Gly Thr	
85	90
His Met Val Pro Arg Cys Gln Val Glu Gly Cys Glu Met Glu Leu Thr	
100	105
Ala Ala Lys Asp Tyr His Arg Arg His Lys Val Cys Glu Leu His Ser	
115	120
Lys Phe Pro Lys Val Ile Val Asn Gly Ile Glu Gln Arg Phe Cys Gln	
130	135
Gln Cys Ser Arg Phe His Thr Leu Ser Glu Phe Asp Glu Gly Lys Arg	
145	150
Ser Cys Arg Arg Arg Leu Ala Gly His Asn Gln Arg Arg Arg Lys Pro	
165	170
Gln Leu Asn Ser Thr Ala Met Lys Ala Ala Arg Phe Ala Ser Thr Phe	
180	185
	190

Tyr Asp Asp Gly Arg Leu Ser Ser Ile Leu Met Ala Arg Ser Pro Phe  
                   195                                  200                                  205  
 Met His Pro Arg Ile Ala Ser Asn Leu Glu Glu Asn Ser Leu Asp Phe  
                   210                                  215                                  220  
 Lys Leu Gly Gly Tyr Gly Lys Gly Ala Trp Pro Arg Ile Lys Ala Glu  
 225                                  230                                  235                                  240  
 Asp Val Ser Ser Tyr Asp Gly Gln Leu Ser Thr Lys Tyr Pro Leu Pro  
                                   245                                  250                                  255  
 Ser

<210> 1926  
 <211> 230  
 <212> PRT  
 <213> Eucalyptus grandis

                  <400> 1926  
 Met Asp Val Gly Ser Gly Ser Trp Thr Thr Glu Ser Gly Ser Ser Ser  
   1                                  5                                  10                                  15  
 Pro Pro Pro Leu Glu Ser Leu Asn Gly Leu Lys Phe Gly Gln Lys Ile  
                   20                                  25                                  30  
 Tyr Phe Gln Asn Asn Asn Ser Ser Asn Asn Ala Ala Ala Pro Lys Asn  
                   35                                  40                                  45  
 Gly Ser Gly Ser Gly Ser Gly Ser Ser Ser Ala Ala Ala Pro Ala Pro  
                   50                                  55                                  60  
 Gly Ser Gly Thr Pro Pro Lys Lys Val Arg Ala Ser Ala Gly Gly Gly  
 65                                  70                                  75                                  80  
 Gly Cys Gly Ala Ile Gln Gly Gly Gln Pro Pro Arg Cys Gln Val Glu  
                                   85                                  90                                  95  
 Gly Cys Arg Val Asp Leu Ser Asp Ala Lys Ala Tyr Tyr Ser Arg His  
                   100                                  105                                  110  
 Lys Val Cys Gly Met His Ser Lys Ser Ala Thr Val Ile Val Ala Gly  
                   115                                  120                                  125  
 Ile Glu Gln Arg Phe Cys Gln Gln Cys Ser Arg Phe His Gln Leu Thr  
                   130                                  135                                  140  
 Glu Phe Asp Gln Gly Lys Arg Ser Cys Arg Arg Arg Leu Ala Gly His  
 145                                  150                                  155                                  160  
 Asn Glu Arg Arg Arg Lys Pro Pro Pro Gly Ser Leu Leu Ser Ser Arg  
                   165                                  170                                  175  
 Tyr Gly Arg Leu Gln Ser Ser Ile Phe Glu Asn Thr Thr Arg Val Gly  
                   180                                  185                                  190  
 Ser Phe Leu Met Asp Phe Thr Ala Tyr Pro Lys His Ala Trp Ser Ala  
                   195                                  200                                  205  
 Pro Arg Phe Ser Glu Arg Thr Thr Pro Gly Asp Leu Val Pro Gly Pro  
                   210                                  215                                  220  
 Gly Lys Val Tyr Pro His  
 225                                  230

<210> 1927  
 <211> 35  
 <212> PRT  
 <213> Eucalyptus grandis

                  <400> 1927  
 Gly Lys Arg Ser Val Glu Trp Asp Ser Asn Asp Trp Lys Trp Asp Gly  
   1                                  5                                  10                                  15  
 Asp Leu Phe Val Ala Arg Pro Leu Asn Pro Val Pro Ser Asp Phe Pro  
                   20                                  25                                  30  
 Gly Arg Gln  
                   35

<210> 1928  
 <211> 112  
 <212> PRT  
 <213> Pinus radiata

<400> 1928  
 Glu Glu Thr Cys His Gly Asn Thr Phe Cys Arg Thr Glu Ile Ser Ser  
 1 5 10 15  
 Phe Thr Gly Ser Gln Ile Pro Gln Cys Gln Ser Glu Gly Cys Lys Ala  
 20 25 30  
 Asn Leu Ser Ser Ala Lys His Tyr His Arg Arg His Lys Val Cys Glu  
 35 40 45  
 Phe His Ser Lys Ala Pro Thr Val Val Val Gly Gly Gln Ile Gln Arg  
 50 55 60  
 Phe Cys Gln Gln Cys Ser Arg Phe His Gln Thr Ser Glu Phe Asp Gly  
 65 70 75 80  
 Gly Lys Arg Ser Cys Arg Lys Arg Leu Ala Asp His Asn Arg Arg Arg  
 85 90 95  
 Arg Lys Pro Lys Pro Ser Gln Cys Thr Thr Ser Gln Cys Gln Ala Gly  
 100 105 110

<210> 1929  
 <211> 117  
 <212> PRT  
 <213> Pinus radiata

<400> 1929  
 Met Asp Glu Val Gln Val Lys Val Asp Ile Gln Ser Thr Asn Val Ser  
 1 5 10 15  
 Ala Asp Glu Pro Arg Pro Ala Lys Arg Gln Gly Phe Glu Leu Ala Lys  
 20 25 30  
 Ser Pro Glu Asn Val Ala Ser Lys Ser Thr Ala Leu Ser Ser Pro Lys  
 35 40 45  
 Lys Pro Lys Ala Ala Ser Ser Ser Ser Ser Ser Pro Arg Ala Gln  
 50 55 60  
 Pro Pro Ala Cys Gln Val Glu Lys Cys Ala Ala Asp Leu Ala Asp Ala  
 65 70 75 80  
 Lys Glu Tyr Tyr Arg Arg His Arg Val Cys Glu Gln His Ser Lys Ala  
 85 90 95  
 Arg Ile Val Leu Val Leu Gly Leu Gln Gln Arg Phe Cys Gln Gln Cys  
 100 105 110  
 Ser Arg Phe His Val  
 115

<210> 1930  
 <211> 143  
 <212> PRT  
 <213> Pinus radiata

<400> 1930  
 Met Ser Ser Thr Ser Ser Tyr Ser Ser Pro Ser Pro Asp Thr Pro Ser  
 1 5 10 15  
 Gln Ser Ala Ala Val Arg Pro Thr Ser Thr Arg Asp Asp Ser Ser Val  
 20 25 30  
 Met Glu Pro Pro Arg Lys Arg Ala Arg Ala Asp Leu Asn Ala Glu Gln  
 35 40 45  
 Arg Arg Glu Ala Arg Ala His Arg Asn Arg Ile Ala Ala Gln Asn Ser  
 50 55 60  
 Arg Asp Lys Arg Lys Ala Gln Phe Thr Tyr Met Glu Gln Arg Val Ala  
 65 70 75 80  
 Gln Leu Glu Glu Glu Asn Gln Arg Leu Arg Ala Gly Met Gly Leu Ser

				85						90					95				
Gln	Phe	Thr	Pro	Ala	Asp	Asn	Asp	Lys	Phe	Val	Ser	Leu	Glu	Arg	Glu				
			100					105					110						
Ser	Val	Gln	Ala	Arg	Glu	Asn	Arg	Glu	Leu	Lys	Glu	Arg	Ile	Lys	Ser				
		115					120					125							
Leu	Glu	Ser	Gly	Trp	Ser	Ala	Val	Ile	Lys	Ala	Leu	Gln	Ala	Ser					
	130					135					140								

<210> 1931  
 <211> 199  
 <212> DNA  
 <213> Pinus radiata

<400> 1931

aacaactgaa	caataaaaaat	cacaagcact	gaatctaacc	atctctccac	aaagcagaat	60
catttttttag	cagtgcagaa	ttaaatacaa	acacaattgt	tcggctgtaa	agcaaagatg	120
aagcatcacg	tagtgcacaa	ttgctgtagc	aagaaagctg	ttaaagagagg	cttctggctg	180
cccgaggaag	atttgaagc					199

<210> 1932  
 <211> 380  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1932

gggatctcta	ggaacttcgt	gaaaacgcgg	acgccgacac	aggtggcgag	ccacgcccag	60
aagtacttcc	tccggcggac	caaccagaac	cggcgacgcc	ggcggtccag	cctcttcgac	120
ataaccaccg	actcgtactt	tggggtttca	agctctacaa	tggaggaggg	tcatcatcaa	180
gcgcaccaag	taccagctt	cctctttcc	ttgcctccgg	cggtttcacc	gggaaccggc	240
gagaaaactgc	tggaaagtct	gcgactaaga	aaagagggct	gccagtcgaa	acccaccccg	300
tcgaagccca	tccgcccgg	cccgatcctt	cccatccctc	cgtcctcgaa	aatggcggct	360
ctcgacctca	acaaggcgac					380

<210> 1933  
 <211> 630  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1933

ggaccggcga	gtttctccgg	ggaagaccgg	cggagcggcg	gcggcggcgg	cggcggcggg	60
gggaaaagct	cccgcctttc	gtcgtttcgc	ggtccgtgga	ataggcgaca	agtcggattg	120
cgttgctgtg	cgcgcctcgc	ttcgatatata	agggcgggctt	gctgctgctg	ctactggtct	180
gaggagtcaa	ccgagctcga	gcgttacgcg	cttcccgaag	gttccgcccgg	ctaggggtttt	240
tttatatttc	cctctgtttt	tcctccggtc	ggccacgggtc	gttgcttcgc	tttaaaagga	300
ttggcgcgat	tgagctgggc	ggagcttgag	ggttcggggc	gtggcggcgg	aagtggagtg	360
gagcgggggg	tgggtggtgct	cgacatggta	atcgggttct	gacgatgccg	agctttgttc	420
cagcgacacc	ggcctccaat	tccattgggt	cggagggaaa	cgttggtccag	tctaatacaa	480
atacagattt	tgggtcggtt	gagcattcac	ttggattccg	catagaggat	gccatcaacc	540
ttagcagaac	agatcctgtc	tttaatcaga	taaaaccaa	cggtcgagct	cttgggaactg	600
acattcaagc	tcgtgctttt	aataagtctg				630

<210> 1934  
 <211> 524  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1934

ctttactatt	ctaagtcctc	tactttctggt	ttggaatcac	taattttcttg	gtctcacttt	60
cgcttggtct	atcacccgag	agttctctgc	agaaacttca	cagccgtcct	ctgctctttc	120
accaaccatt	gtatgcctgg	ttttactagg	gctaggaaga	tgagcatgtc	cggagaagaa	180
gagggtgacc	tgcgaagggg	gccatggact	cgcgaggaag	acaatttgct	cattcactcg	240



atcacatgcc	acggcgaggg	acgctggaat	atgttggcga	agagcgcagg	attgaagaga	300
actggcaaaa	gctgcagatt	aaggtggctg	aattacctga	gacccgacat	caagcgcggg	360
aatctcacc	cgcaagaaca	gctcatgatc	cttgaacttc	accacaaatg	gggcaacagg	420
tggtcgaaaa	tcgcgcagta	tctcccagga	aggacagata	acgagatcaa	gaactactgg	480
aggacgcggg	tgcagaagca	agcgcgccag	ctcaacatcg	aatc		524

&lt;210&gt; 1935

&lt;211&gt; 440

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1935

gtgctgtgac	aaggtgggat	tgaagaaagg	gccgtggaca	cctgaagaag	accagaagct	60
cctcgcttac	atcgaagaga	acggccatgg	aagctggcgt	gctttgcctt	ccaaagctgg	120
tcttcagaga	tgccgggaaaa	gctgtaggct	aagatggact	aattatctta	gacctgacat	180
caagagaggg	aagttcagct	tacaagagga	acagaccata	attcaactcc	atgcccttct	240
tggcaatagg	tggtcggcca	tagcaactca	tttaccgaag	cgaacagaca	acgagatcaa	300
gaactactgg	aatacgcata	tgaagaagag	attggcgaaa	atgggaattg	acccggtgac	360
ccataagcct	aaaaatgacg	ccctagtctc	tagtgacggt	caatccaaga	gcgcggctaa	420
gctcagtcac	ctggctcagt					440

&lt;210&gt; 1936

&lt;211&gt; 299

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1936

cggacccttc	cgaaaaaatgc	agggctcagg	agatgcggaa	agagctgtcg	cctgcggtgg	60
acgaactacc	tgccggcccg	tatcaagaga	gggaggttca	cgttcgagga	agaggagacc	120
atcatccagt	tgcattggtgt	tttggggaac	aagtggctcg	ctatcgccgc	tcaattgccc	180
gggaggaccg	acaacgagat	caagaactac	tggaaacccc	acatcaagaa	aaggctactt	240
aaaatgggga	tcgacccggg	gacacactcc	ccacgcctcg	atcttctaga	tctgtcctc	299

&lt;210&gt; 1937

&lt;211&gt; 377

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1937

ggccctctc	tctttctctc	tctctgtgtc	tgtctttctt	gtggatccac	caggctcgtc	60
tttaagaata	tacagcagcg	agcaggcaag	acaacgcccc	atctctcttc	tctctctctc	120
tctctctgtg	gctctgtctt	tcttttgttt	cttgccgttt	tggggtgtgt	gtgttgggtt	180
gtgtgaattg	gagcagaggat	ggggaggggg	agactgcagc	tgaagaggat	agagaacaag	240
atcaaccggc	aagtcacctt	ctccaagagg	agggcggggtc	tgctcaagaa	ggcccacgag	300
atctccgtac	tctgcgacgc	cgaggctcgc	ctcatcatct	tctccgcca	gggcaagctc	360
ttcgagtact	ccaccga					377

&lt;210&gt; 1938

&lt;211&gt; 278

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1938

tgtagcaag	catgtatgta	ctaactagta	gtttttgtaa	agcatgatgt	cgaaaccttg	60
agtagcaagg	tgaagatggc	tgaagagacg	gttaaaagag	taaccggact	gaacccaatg	120
ctgcatgtga	tgtccgacat	gtcttctgtg	ggtgtgccac	catttgatgg	tagtccttct	180
gatacatcag	cggatgctgc	agttcctgtg	cgagatgacc	caaagcacca	attctatcaa	240
accaattcta	gtaaccccg	atcatctgct	gacgatat			278

&lt;210&gt; 1939

&lt;211&gt; 342

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1939

acaggttgct	caattaagag	ttgagaattc	tactttactg	aaacgtctct	cggacataag	60
ccagaagtac	aatgtagcag	ctgttgacaa	cagagttttg	gaagctgatg	tcgaaacctt	120
gagagcagag	gtgaagatgg	ctgaagagac	ggttaaaaga	gtaaccggac	tgaacccaat	180
gctgcatgtg	atgtccgaca	tgtcttctgt	gggtgtgcca	ccatttgatg	gtagtccttc	240
tgatacatca	gcggatgctg	cagttcctgt	gcgagatgac	ccaaagcacc	aattctatca	300
aaccaattct	atgtaacccc	gcacatctg	ctgacgatat	ga		342

&lt;210&gt; 1940

&lt;211&gt; 376

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1940

gctgttttca	catctttttg	aacacgcccc	taaagatccg	ccctcagagc	cgcctctgtc	60
cgggtggctgc	tgacattcca	cctagaaatt	cccgaccaag	ttcccccttt	ctaagccaga	120
ttgggaaagg	ttcatatttg	tccaacagta	gtagtggatt	taaatgggga	ggcactcttg	180
ctgctacaag	cagaagctga	ggaaaggcct	ctggtcacct	gaagaagacg	agaagctcct	240
caggtacatc	acgcagtatg	gccatgggtg	ctggagctct	gttccctaagc	ttgcaggtct	300
gcagaggtgt	gggaagagct	gcagattgag	gtggattaac	tacctgagggc	ctgatttgaa	360
gaggggcaca	ttctct					376

&lt;210&gt; 1941

&lt;211&gt; 169

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1941

aggaattgca	gcacctggaa	cagcaattga	gtggggcctt	atcatctgtc	aaggagaaga	60
aggagcaatg	gcttctggag	cagctggagc	gttcaagatt	acaggagcag	agggctatgc	120
tggagaatga	aactctgcgc	agacaggtcg	acgagcttag	aggtttcct		169

&lt;210&gt; 1942

&lt;211&gt; 188

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1942

cgagatctcc	gtcctctgcg	acgccgacgt	cgccctcacc	gtcttctcca	ccaagggcaa	60
gctcttcgag	tacgccaccg	actgttgcat	ggagaggatc	ctcgagcggt	atgagagata	120
ttcatatgca	gagagccagg	ttctcacaaa	caatgccgaa	accaatggga	actggacttt	180
ggaacatg						188

&lt;210&gt; 1943

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1943

ctctttcctc	ctcaatcgga	agggttcttc	aacccaatgg	acggcaacct	ctcattgcaa	60
atcggaataca	atccgacatg	tctggacgag	atgaatgctt	cggtttcgag	ccaaaatggt	120
gctggattca	ttccgggatg	gatgctttga	acttactaca	tcgacttgga	gtgtgaatcg	180
agctggtgaa	atttgtgcgt	gtgtcccttg	taaaattgcg	atccgcaaga	caataagtac	240
ataatatatt	ggagctgtga	tgacataaaa	agaggaaggc	caccctttcc	tctctcatga	300
tcagaacttt	tgataatgtc	t				321

&lt;210&gt; 1944

&lt;211&gt; 905

<212> DNA  
<213> Eucalyptus grandis

<400> 1944  
ctagtggatc ccaagtctcc atcatcatga tctccagcac cggcaagctc cacgagtaca 60  
tcagcccctc cacctcaacg aagaagatgt acgatcagta tcagcaggcg ctcgagggtg 120  
atctctggag ctctcactat gagaagatgc aagagaacct gaggaagctg aaggagggtga 180  
acaagaagct tcagctggag gtcaggagga ggttcgggga aggactgaat ggtatgagct 240  
tatcggaatt gtgcggtctt gagcaagata tggacaacgc cgttagcctg atccgtgaac 300  
ggaagtacaa gacgctcggc aatcaaatcg acaccgccag gaagaagaaa aagaatgctg 360  
aggaataaaa caaaagtctc ctgcaagact ggaccaatct gatcaagcat ctgagggagg 420  
acgacccgca cttcggaatg gtcgacaacg gcagggatta cgaggctgtg atcgggtata 480  
cagacgccgc cgccgccgct cgcttgtaca ccctgcgcct gcaaccggac cagcccaatc 540  
ttactagcgg agggaggatcg gagatcacga cctacccttt gctcgagtga gacgaaggcg 600  
tcggaaaccc ttccgacgct ctcatattgt ctattcattc tgtctaaggg ccgattccat 660  
ctggaatcct gacttcattg gtatgtcgaa gtttaggact ttgttatgtc atcctattca 720  
gcagctaagt ttgttcttat cagaagctgt tcctattatg gaccgagggc gatttcctct 780  
agggcatcat gtgttttaag acaagtctat atataagact actttaaaaa aatcgaatga 840  
gttggtgcaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaact 900  
tcaag 905

<210> 1945  
<211> 337  
<212> DNA  
<213> Eucalyptus grandis

<400> 1945  
gcggcaagga gcaactaaat gtaacactct gattactagg gacctctcat tgtcttttga 60  
tggcatttaa atcaccagga ggaatcacgt ggctgaaaca tttacttgtg aagaactttt 120  
acttagggga gcatctaaaa tgcaggaatg ggctcatcaa gaaggcctac gagctctccg 180  
tcctctgcga catcgacatc gccctcatca tgttctcccc ctccgaccgc gtgagccact 240  
tttcgggaaa aagaaggatc gaggatgtct tgacccggtt cattaacctc accgaccaag 300  
aacggacact cctagatgtc caggatcggc gcacacg 337

<210> 1946  
<211> 301  
<212> DNA  
<213> Eucalyptus grandis

<400> 1946  
caaaccttcc cagggtttcc atttccattt ccttcataga atgctccggt cctttcttat 60  
cccttttttg gtactctctg ttctcatggt cctttcataa agttttctca tctcttaacc 120  
aagactggta agagagagag agatagagag tttattagtg ggtgagggtg ttaaaaaatg 180  
ggaagaggga ggggttcagct gaagaggata gagaacaaaa ttaacaggca agtgaccttt 240  
tccaagagaa ggaatgggct cctcaagaag gcttatgagc tctcgctcct ctgtgatgct 300  
g 301

<210> 1947  
<211> 354  
<212> DNA  
<213> Eucalyptus grandis

<400> 1947  
gccaagtagc accccgtttg cccacatta tctgtgatat gtaaactgtg tgggcctctg 60  
ttagctacaa tatgattggc atcatttaag cttttgcgta atcatcagtg ttctcaattt 120  
gcaaaatacc attaacggat cttgcagcat ggaaagcatt ttagagagggt acgagagata 180  
cacttatgcy gagcgacagc aagtggccac tgattccctt caagtgcagg gaagttggct 240  
gcttgaatat cccaagctcg tggctaggat cgaagtcttg cagaggaaca taagaaactt 300  
gagcggagaa gagcttgatc ccttgagctt gagagagctg cagtatttgg agca 354

<210> 1948

<211> 456  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1948  
 gtttcctctt caggagaaaag caaggagctg tagaggaatt gaaaatggtg caagaagtcc 60  
 gaaagggtcc atggacagaa caagaagatt tccaactggt gtgctttggt ggactttttg 120  
 gagatcgccg atgggatttt atagcgaagg tatcaggttt gaagggtggcg ggagaaaata 180  
 ataggtatgt tcgtttttaa gcctgggggt tttttggaag gagctacttc taaccgcca 240  
 gctttattcc aggattgaat agaacaggaa aaagctgcag actacgctgg gttaactacc 300  
 tgcacctcgg cctaaaacga gggaagatga cacctcaaga agagagactg gtgctcgaac 360  
 ttcatcccaa atggggaaat agatggtcaa gaattgctcg caagctacca gggcgaacgg 420  
 acaatgagat aaagaactat tggaggactc atatga 456

<210> 1949  
 <211> 382  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1949  
 atttttcaac tccccccccc cacccegaat caaatcccat tccctctctc cctccctccc 60  
 tttttttccc ccaatctttt gttgcgtttt caagcaccca cgcccccaa tctccaacgc 120  
 catcaatcaa gctcaagcac catcacctca agaagaaaga aggaaagaaa gagagaagga 180  
 ccggagaccc gacagagggg cgcgcgcgca cgagacatgg gacgatcccc ttgctgcgag 240  
 aaggcgcaca ccaacaaggg cgcggtggacc aagggaagagg accagcgctt catcgactac 300  
 atccgcctcc acggcgaagg ttgctggcgc tccctcccca aatctgccgg gcttctcagg 360  
 tgcggcaaga gctgcaggct ca 382

<210> 1950  
 <211> 371  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1950  
 gttgagcagg tacagtttct tgaaaagagt tttgaagtag agaacaagct cgagccagat 60  
 cgcaaaatcc agttggcaaa agacctcgga ttgcagccac gacaggtagc gatatggttt 120  
 cagaatcgtc gtgcacggtg gaagacgaag cagctagaga aggattatga aactttgcaa 180  
 gcttctttta acaccctgaa gtcagactac gacactctca tcaaggagcg gaatgatctg 240  
 aaagccgagg ttcttaacct cacggacaag ctgcttcaca agggaaatga gaaggagagt 300  
 tccgagtcgt ccagcaaatc atctcaaggg ctattccaga accccattgc tgattctggt 360  
 tctgaggacg a 371

<210> 1951  
 <211> 356  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1951  
 aaaaagcata agctccctga ccataatcc ctagtatcga tggccagggt tcccagggtt 60  
 gacaagagca acagcaagaa gacagtgaag aaggcgctt ggagtgcgga agaagaccag 120  
 aaactggtgg cttatatcaa gagatatggc atttggaact ggactcacat ggccgaaccc 180  
 gccggtttag cgagaacagg aaagagttgc cggcttcgat ggatgaacta tctgaggccc 240  
 aacatcaagc atggaaacat caccgaagaa gaggaagaaa tcattattaa cttgcaccga 300  
 gttcttggtg accgttgggc cagcatagcg agcagacttt caggaaggac ggacaa 356

<210> 1952  
 <211> 475  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1952

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gacaagggaat	atggcgagag	agaagatcaa	gatcaagaag	atagacaatg	tgacggcgag	180
gcaggtgacg	ttttctaaga	ggagacgagg	gcttttcaag	aaagccggag	agctgtcggt	240
cctgtgcat	gccgaggtcg	ctgtcgtcat	tttctcggct	accggcaagc	tctttgagta	300
ctccagctcc	agcatgaagg	acactcttga	gaggtacacc	ctccaccaca	ataatcttga	360
gaatatggac	caaccttctc	tcgagctgca	gctggagcat	agcaataaca	tgaggttaag	420
caaggaagtg	gcagaaaaga	gccatcgact	caggcagttg	aggggtgagg	atctt	475

&lt;210&gt; 1953

&lt;211&gt; 541

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1953

atcgcccccg	ttctctcect	ctctctcect	ctcccccta	acgtttctgg	ccctcttctt	60
tgtctggaca	aaaagatggg	aagaaagtgc	tctcgctgtg	ggaacatagg	ccataactca	120
aggacttgca	caactttcat	ggggcgagca	agtgttgtg	ggctcaagct	cttcggtgtt	180
caacttgacc	tatcttcttc	ttctctcect	tcatcatcag	catctagtgg	ttctgctcat	240
ccttattcac	ttgtcataaa	gaagagcctc	agcatggatc	gtctgtcttc	ttcctcggcc	300
tcctcctcgt	ctccatcttc	atccctctcc	tcgccaaagag	ttcttgctga	tgaacactgc	360
aataagacct	ccctcggata	tctctctgat	ggcctcgccg	ctagatccca	ggagaaaagg	420
aaaggagttc	cgtggacgga	agaagagcat	cggacattct	taatggggct	agagaagatg	480
gggaaaggcg	attggagagg	catctccagg	aactatgtga	ccacgagAAC	cccaaccCAA	540
g						541

&lt;210&gt; 1954

&lt;211&gt; 437

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1954

cgcggttggc	gtcagataga	agagcatgta	ggaacaaaaa	ctgcagttca	gatacgaagt	60
catgccccaa	agttcttctc	taaggttgct	cgcggggtaa	gtggcagcag	cgagggtgtg	120
attaaaccAA	ttgaaatacc	tcctccacgg	ccaaagcgga	agccaatgca	tccatatcca	180
cgaaatctg	tcgattcaaa	ggaggtgaaa	ctgtcctatc	aacaagagag	gtctccatct	240
ccaatctctt	cggtagcaga	tgaaaacact	ggatctccta	cttcagtttt	gtctgctcat	300
ggttcagaca	tgctgggata	agcatctttg	catcaacaaa	acagatgctc	ttcaccgact	360
tcatgtacca	ctgatgtacc	ctctattggt	ctagctgtaa	ttgagaagca	acctgaaata	420
ttcaaagaag	aagataa					437

&lt;210&gt; 1955

&lt;211&gt; 470

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 1955

attcggtcac	gagttcactt	cgtcgcctgc	ctcgtcgtcc	tcctgtctct	cctcgcgaaat	60
ctccatcggc	gagaactctg	ataaagcatc	cctcggctat	ctgtcggatg	gcctgctggg	120
tagatcccaa	gagaagaaga	aaggagttcc	atggacagag	gaggaacaca	gaaccttctt	180
ggtggggctt	gagaagcttg	ggaagggtga	ttggagaggc	atctctagga	gctatgtgac	240
cacaagaaca	ccggcccagg	ttgcaagtca	tgctcagaaa	tatttcctcc	ggcaagtgtg	300
cttcaacaag	aaaaagcggc	gctcgagcct	ctttgacatg	gttgatgtca	aaaccgcggc	360
gggtgatcgt	ttaggcagtt	tgacggccaa	gccgagtgag	tcagttccta	attgcaaaaat	420
gggaaccttg	atgtctcatt	tgcaagttca	tgatgccaga	accactcagc		470

&lt;210&gt; 1956

&lt;211&gt; 384

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

<400> 1956  
 ctgaaatttc gtcttcaagc catggaacaa caggcgcaac tacgcatgc cctgaatgaa 60  
 gcattgactg ctgaggtgca acgattgaag cttgcgacag cagagctcaa ctcggaatct 120  
 catccttcaa agtgcattggt ttcacagctt cctgtgagct cccaaatggt ccagctccat 180  
 cagatgcaac agcagcagca gtctcagcaa caaactcaat cacagcagca aaatggtaac 240  
 acaaccacaa agtcagagtc gaatcaatag gacgtgggtg gtccaacaac tccggcgctt 300  
 ggacaaacct cacttgtctc gggtcttcga caccctgcag tagttctcta gtgcatccat 360  
 tcattcatta gtttttgc atgc 384

<210> 1957  
 <211> 388  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1957  
 gtttcctctt caggagaaag caaggagctg tagaggaatt gaaaatgggtg caagaagtcc 60  
 gaaaggggtcc atggacagaa caagaagatt tccaactgggt gtgctttgtt ggactttttg 120  
 gagatcgccg atgggatttt atagcgaagg tatcaggttt gaagggtggcg ggagaaaata 180  
 ataggattga atagaacagg aaaaagctgc agactacgct gggttaacta cctgcatcct 240  
 ggcctaaaac gagggaagat gacacctcaa gaagagagac tgggtgctcga acttcattcc 300  
 aaatggggaa atagatgggtc gagaattgct cgcaagctac caggggcgaaac ggacaatgag 360  
 ataaagaact attggaggac tcatatga 388

<210> 1958  
 <211> 455  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1958  
 tgacgatgtt tgtggaggag gaaagagacc ggaaaggcct ttcttttgca catatgacgg 60  
 ggaggaaaaat ggagacgatg attatgatga gtatttacac caacctgaga agaaaaggcg 120  
 attgtctatc gagcaagttc tgtacttgga gaagagcttt gagactgata acaagcttga 180  
 accagataaa aaagttcagc ttgccaaaga actcgggttg caacctcgtc aagttgctat 240  
 ttggttccaa aatcgaaggg caagatggaa aactaagcaa atggagaagg atttcgataa 300  
 attgcaagct agttttaact gtttgaagtc tgattatgaa agtcttctca atgagaagga 360  
 gaagctcaaa gctgaggtta ttcatattgac acaccagcta gagcaaaagga gcaacggaaat 420  
 tctgaaccat tcgacatatc tgaacaattg cacac 455

<210> 1959  
 <211> 965  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1959  
 aagagaaaaag atacaatccg ccgtggaccc aagaagggtca aagcccgtct tctgcacgat 60  
 gatgggtagt agtagtagta ctacttatct tccgtgaggt ctctcgaatt agggttttct 120  
 tgattttcgc caacccccca atatttatct tttctttctt tctttttttt cgtctctctc 180  
 gcagttcacc tagaaaagct acgagggctt cgcaccagtt ccgtacgggg ctgcttcagt 240  
 gcgtagcgtg tactatctcg tctcaggtgg tgtttcgtt ttatggggat gtccttcggc 300  
 gggggcggtt cgaagattct tgtagctccg tagcttgctc tgcgggattt ggttggggccg 360  
 atcgtcaggt ttcttccagt taaagttgct atttttaagg ggagcgaggg cgtttgagct 420  
 ggtaaagttc gaagcttttt gagttcggcc gccaggggtg tgtcctagag ataactggag 480  
 gcgaaagggg gcgttccggt ccggtcagca tccgctgact caggagatgg ttggggggtg 540  
 ttggtggcgg cggtgatgat gattcatggg tagtaggact agagttggcg gtgggtggaga 600  
 tgatggcaga gttgtgaacg gcatgccgag ctctgctcct caattaccca ctctgaattc 660  
 catgggatca gaaggaaact ccattcggtt ttctcgaatt acagactttg gaacacttga 720  
 gcagtctctt ggataccgca tagaagatgc agttgacctc agcagaaatc ctgtcttcaa 780  
 tcagatgaaa tcaagtggcc aggtctcttg ggctgatgtc caatttgggt ctttgaataa 840  
 gtccctttca tctcagaca gaaatcttct tgtgaatatt gtgggggtct agactctatc 900  
 tatgcataga gaatcacaat caaacttagt atcaataccc ggtgctcatc gtgagaactg 960  
 ggggg 965

<210> 1960  
 <211> 599  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1960  
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 tctctcgccg tccaaccgta cggactctcg gttttgcgc gaaacggaac ggagcggacc 120  
 cgggtccctcg ccgtcgccgg tgcgagagaa tgctcccc acgcgccgcc acccccgacg 180  
 tcgccggcga cgagagctcc ggcgccgacg ccggcgccgg ggagatcatg ctgttcgggg 240  
 tgcgggtggg cgtggactcg atgaggaagt gcgtgagcct gaacaacctg tctcagtacc 300  
 agcaccgcga ggacgcgaat ccgcccaacg ccagcggcgg gagcggcggc aacaaggaag 360  
 aggccgccaa aggtacgca tcggccgacg acgccgcgca caaccgccgc ggtggccgcg 420  
 agcgcaagag aggagttcct tggacagagg aggagcacag gctgttcttg ttgggattac 480  
 agaaggtggg gaaaggagat tggagagcga tatccaggaa ctttgtgaag acccgcacgc 540  
 ccactcaggt cgcgagccat gccagaaat atttctcgcg ccgaagcaac ctcaatcgc 599

<210> 1961  
 <211> 377  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1961  
 ggagaacgtg gcttctgggt cgactgagcg gccgagaatt agacatcagc atagccagtc 60  
 tatggacggg tcgacgagta ttaagcccgat gatgcttatg tcgggttcag aggatgcatc 120  
 tgctgcagac gccaaagaagg ccatgtctgc tgcgaagctt gctgagcttg cactgattga 180  
 tcccaagcgt gcaaagagga tctgggcaaa cagacaatcg gctgcaaggt caaaggaaag 240  
 gaagatgcga tacatagctg agctagaacg gaaagtacaa actttacaaa ctgaagcaac 300  
 aactttgtct gcacagctga ctctgctgca gagagacaca aatgggttga ctgctgagaa 360  
 tagtgaattg aaactgc 377

<210> 1962  
 <211> 317  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1962  
 aagtaaaatc ccctctcggc tcccttttct tttatgtaca ttccaagaac agcgacagat 60  
 aaggccccga gatctgcaag tcttcttcac actactcgct gatggctgat tctgaacatt 120  
 cttcttctga tgacacttac gtggactcta gagaagagac aagtgaagaa tcaaagctag 180  
 atttctctga agatgaggag acgcttgtaa ttagaatgta caacctgggt ggagaaaggt 240  
 ggtctctaatt tgctggtaga atcccaggga ggacagctga agaaatcgag aagtactgga 300  
 attccagata ttcaaca 317

<210> 1963  
 <211> 471  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1963  
 ctctctctc ataatgcata attcacaggc gcggcacaag gcacgaaaag ataaaaaaaa 60  
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 aagaaacgct gattccgagt tcttccgagg ctcttgagtc cgcctgggtt cctacttctt 180  
 cgaccgctca tcatggttca aaatcagtg tcaattttga ggacgtttgt ggaggaggag 240  
 acaccaatac tgcgccgagg ccatacctcc gacagattga tctgaaggaa gaagccgtcg 300  
 aagaggacta cggcgacggg aactttcagc ctctggtaa gaagcggcgg ctatcgcccg 360  
 accaagtcca tttcctcgag aggcactttg aggtcgagaa caagctcgag cccgagagga 420  
 agatccagct cgccaaggac ctcggcctgc agccgaggca ggtcgcgatc t 471

<210> 1964

<211> 372  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1964  
 tgacactgaa gattcgaaga agaaagagag gcatattgtg acttggtctc aagaggagga 60  
 tgatatactc cgggagcaaa tcggtataca tggaaactgag aactggtcga ttatcgcatc 120  
 aaagttcaag gataaaacga cgagacaatg cagaaggaga tggtaacacat atttgaattc 180  
 tgacttcaag aaaggggggt ggtcacccga ggaagatgtg cttttatgtg aggctcagaa 240  
 gattttcggc aacagatgga cagaaatagc aaaggtgggt tcaggcagga ctgacaatgc 300  
 cgtaaaaaat cggttcacaa ccttgtgtaa gaaaagagca aggtacgaag ccttagcgaa 360  
 agagaataca ct 372

<210> 1965  
 <211> 424  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1965  
 atgcaatttt gagcgtcgcg agtaagccgg agcgagggga gagcgatggg caggcagccg 60  
 tgctgcgaca agcttggggt gaagaaaggg ccgtggacgg cggaggagga ccggaagctg 120  
 gtcaacttca tactcaccca cggccaatgc tgctggcggg ccgtcccca gctcgtctgg 180  
 ctccgcccgt gtggcaagag ctgccgcctc cgctggacca actacctccg ccccgatctc 240  
 aagcgtggcc tcctcaatga agccgaggaa agcctgggta tcgatctcca tgccactctc 300  
 ggcaataggt ggtccaaaat agcagctaga ctaccgggaa gaacggacaa cgagatcaaa 360  
 aaccactgga acacccatat caagaagaag ctcattagga tgggcattga tccagtcact 420  
 caca 424

<210> 1966  
 <211> 427  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1966  
 cccggctccc gctcgtccaa tcggcgcgtc gagaggaaga aaggtaacct atggacggag 60  
 gaagagcatc gaagggtttt aattgggtctc cagaaattgg gtaaaggaga ctggcgaggg 120  
 atagctcgtg actttgtgac tacaaggact cctactcaag tggcaagcca tgcccagaag 180  
 tattatatcc ggcagagtaa tgctggccga agaaagaggc gctccagcct ttttgacatg 240  
 gctccagata tgggtttgtc tctctatgat gttgcttctg cacattcatt gcactccggt 300  
 caaatatccg gctcgtgcat gttttaagat gttttcttag ctcatgctga catatgcttt 360  
 aaccatgcac tagtgatgat tacatgataa gggccattcc tcttagacct ttgggacaca 420  
 tcaaatg 427

<210> 1967  
 <211> 373  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 1967  
 cttgaaaactt ctccgtctt ctcttctctc tcttgaaagg aaggatgaga aaaccttggt 60  
 gtgacaagca agacacaaac aaaggagcat ggtcgaagca agaagaccag aagctcatcg 120  
 actacattcg caagcacggc gaaggatgtt ggcgaactct tcctaaggct gccggtctcc 180  
 tccgttgccg gaagagttgt aggctaagat ggataaacta tttgcggcct gacctcaaaa 240  
 gaggcaactt tgctgaggat gaagaggatc ttatcatcaa gcttcatgct ctcttaggca 300  
 accgatggtc gctaattgct gggagattgc ccggacggac agacaatgaa gtgaagaact 360  
 attggaactc aca 373

<210> 1968  
 <211> 197  
 <212> DNA  
 <213> Eucalyptus grandis



&lt;400&gt; 1968

gggtcgccccga	ggaagacgag	aagctcttca	actacatcac	ccgattcggc	gtcggctgct	60
ggagctctgt	accgaagctc	gccggactcc	agagatgtgg	aaagagttgc	aggttgaggt	120
ggataaacta	cctgaggcct	gacctcaaga	gggggatgtt	ctctcaagaa	gaggaggatc	180
tcattgtcag	tctccac					197

&lt;210&gt; 1969

&lt;211&gt; 365

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1969

gcaaaatctt	atttgggttc	ccttacagaa	actatacagt	ccctgaatgc	tgagcttgaa	60
agaactagat	cggagtgggt	tgaagcaaa	aagagagagg	aagagattat	ttcaaaagaa	120
gctgaaagag	tagagaagaa	taagagagaa	gtggaaaatc	tggaactcaa	tcttctgcaa	180
actactgcag	aagctgggag	agctaaactg	gaactagaga	ctgcttatga	agaggtgcag	240
agcgcaagac	ttgaaactgc	gcaattgagg	gctgctttgg	aagccacaga	gggaaaattt	300
gaagcaatgc	tgagtgcagc	taggttggag	gcagagcatg	tcaaaggagc	tattgagaag	360
tataa						365

&lt;210&gt; 1970

&lt;211&gt; 260

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1970

gaaatattgg	tgactcaa	at	agagcaactt	caaagaaagg	aacggatgtt	tagcgaagag	60
aataattttt	tccgaaagcg	gattgtcgat	ccccattccg	ttttgacaac	tcttgcaagt		120
gcatctggaa	gcctccaaag	aagtgaagtc	gagactcaac	tggttatgag	accgccagtc		180
tcaaagtctg	attttctttt	taatagttct	cattgataat	cactgtattc	atatctttgt		240
tattaattta	ttatgaaatg						260

&lt;210&gt; 1971

&lt;211&gt; 332

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1971

tctctctgggt	gtggggggca	ctcaaaatgg	ggaagacgaa	gatggagatt	aaacgcattc	60
aaaaccctag	ccgccgccag	gttactttct	cgaaacgcaa	gaacggattg	ctaaaaaagg	120
cattcctgagct	ttctgttctc	tgcgatgctg	aagtcgccct	gatcattttc	tcgaaactg	180
gcaagatctg	cgagtgttgc	agccacgacg	acatggcaac	aatactggaa	aaatatcgaa	240
tatacacgga	aacacatgga	aacatggagt	cctcgtcggg	ccaaagcgtg	aagattgggtg	300
aatcacaact	caaagcgttg	cgtgagaaga	tg			332

&lt;210&gt; 1972

&lt;211&gt; 413

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1972

cttcgaggtg	ctaattggctg	cacaataacct	tcaattggat	tgacaagcat	agaacgcgtg	60
gaagtccaga	ctcaactggg	catgagacct	ccacatgcc	cagagatgga	cgacaacttt	120
atggatgttg	acaacgtgcc	actatctgga	tgatgttttt	ctgtttctgt	tacataatat	180
ggccactgat	gacaccatac	tttatttttg	tatttgcttt	aaaaatgact	ctttctttca	240
ctgacttttg	atggactgta	tgatagttga	tttttggtcc	tcatacttta	gcaaatgggt	300
atgggtacct	gttttggtcc	gaggccttgg	aggatctact	ctctatatgt	tactgtttta	360
ctttttacat	ttgtgctcac	tgactcatat	gatggacttg	cccacatatg	atg	413

&lt;210&gt; 1973

<211> 521  
 <212> DNA  
 <213> Pinus radiata

<400> 1973  
 agaagatggg agcttggtga tctgtgaaag atctctctct gcggtcaag gtatgcctat 60  
 ggtatcacag tctcaaagct ttgtgcatgg tgaactctta tctagtgggt atttgatccg 120  
 accctgtgaa ggcagaggag cattagtcac catggttgat cacaggaact tagaggcttc 180  
 aagtgtccct gaagcacttc gtcccttata tgagtcacat acattctttg cacagaagat 240  
 gacagttgag gcttcttata atcttcaagg taaagttcaa cgggaaatga tttccttata 300  
 aaaaaaactc caacagccat gtaatgtacg gtcatacagt caacggcttt gcagaggctt 360  
 taatgaggga gtcaacacat tacctgatga tggctggatg tcattgtcca aagatgggct 420  
 ggggatgtc actatgtgtg taaagtcttt gtcaaattgc cgaaaccaa tgatcatcgtc 480  
 aaatagccta tgttcaacag acatgggcat cttgagtga a 521

<210> 1974  
 <211> 461  
 <212> DNA  
 <213> Pinus radiata

<400> 1974  
 gaaaaatgaa gccttcgagc tcgtttaagg catatgaatg gcatgacat caattcggtg 60  
 aagcttcccc aactcttcca tctcgaacag cagcttgaaa cggccgcaac ccaagttcga 120  
 agaagaaaagg atcaagtttt agacaacgaa aaaatcaagc gaaggaacaa gatgcgccgt 180  
 aaggaagacg agaacatcat tcttcacgaa atgcttgacc agcaccatgg acaaaggag 240  
 gaggataacg ctcagattaa tttcctatgt tgccaacat taaatagatc ggatactact 300  
 ttccctgcat cactactccg cctgcaacca aatcagccaa atttgcagga tattggatat 360  
 taattactga acggaccatc tgtgtgcatc ataatgagaa ggtcatggac ttctcagtaa 420  
 cagtcaatta tgaaaattcg aagtttgtga ggaaaaaaaa a 461

<210> 1975  
 <211> 499  
 <212> DNA  
 <213> Pinus radiata

<400> 1975  
 tgagcccca ggtggagcac cgacctttca gccacatga agacgccacc atcatacaag 60  
 cccatgcgcg gcatggcaac aagtgggcta cgattgccc cctcctaccc gggcgacccg 120  
 acaacgctat caagaaccac tggaaactcga ctctgcgacg tcgctatcat ggcgagaaag 180  
 accagagcaa cgggctagct gtgaacttgg agtcggcagc tgaggacaaa gaaacgatga 240  
 ctccgatgac acctgtcaca gccacggcaa cggcaacggc aacggcaatg ccagtggctt 300  
 tagtgttccc aacggctgca gacaacgtca ggaagcggag caacagtagc tgcagcgcta 360  
 atgacaatcc aggagatgcc gaggtcgaat cctgtaggct taagaggctc aatttttctg 420  
 aatccccatc tagttctgaa aatattaata ataataacaa taatgaagaa gctgttagtg 480  
 gccattgcaa ttcggccgc 499

<210> 1976  
 <211> 419  
 <212> DNA  
 <213> Pinus radiata

<400> 1976  
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 agggcgatcg aggtcgaaag gggcatttta cgccattgaa gcggtgtgca tagggccaac 120  
 tctgagaact gattgtgtct tccttcggag ggagaggggt agcgaggctc agaaagagag 180  
 agaaagagaa agtagtccta agggactgtt taaaatgggg cgaggctccag tccagctgag 240  
 aaggatagaa aacaaaataa atcgtcaagt aacgttttcg aagagacgga atgggctgat 300  
 aaagaaggcg tcagagctgt caatcctgtg tgatgcggaa gtggccttaa ttgtcttctc 360  
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<210> 1977

<211> 459  
 <212> DNA  
 <213> Pinus radiata

<400> 1977  
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 accagatctg aagcgaggca cattctctcc gcaggaagaa aatctcattg ttgaactgca 120  
 ttcagtcctc ggggaacagggt ggtctcaaat agcaacacac ctgcccggaa gaactgataa 180  
 cgagatcaag aacctctgga actcgtgcat taaaaagaag cttaggcaac gaggcataga 240  
 tctaacacg cacaggcctc tcagcgagggt gaatgccgag gcaggggatt ctaagaacga 300  
 taacagcaat aaagaagtcg aaactcaggc agccatggac gaatctcatg tttctgcagg 360  
 gaacgaattc aagcatctga atgcaattcc tagggctgat acggccaatc cttaaattcctt 420  
 tcatgttccc gttgaggaca acactttgat tgctagcga 459

<210> 1978  
 <211> 331  
 <212> DNA  
 <213> Pinus radiata

<400> 1978  
 ggagagtgc ccaccgagat ccacgcagtc gaagagaaa agaaatctgc aggaggagtt 60  
 gaaaatgagg tgcacacgat ggcaaggctt cccattttcc tccaaaccaa aagttaaaaa 120  
 ggtctctgg tcgcctgagg aagatgagaa actcatcaat tatatgatga agaacggcct 180  
 tctcggctgc tccctggagct atgtggccaa gcagattggt ctgcagagat gcggaaaagag 240  
 ttgcagactg agatggacta actacttacg tccctggcctt aagcgggggtg caatttccgcc 300  
 tgaggaggag caattgatca tacacttaca g 331

<210> 1979  
 <211> 375  
 <212> DNA  
 <213> Pinus radiata

<400> 1979  
 gttctatcaa acttcttacc caccataccc atttccatta gacggctgaa ttctcagatc 60  
 caatttggtc cagccctcta gcgacagaag aagatgggaa gagcaccctg ttgtgacaag 120  
 gcaaatgtca aaaaaggacc ttggtcacca gaagaagaca caaaactcaa ggcgtttatt 180  
 gaacagcatg gcaactgggtg caattggatt gctcttccac agaaagctgg tctgaaaagg 240  
 tgtggaaaga gctgcaggct tagatggttg aactatttga ggccagatat aaggcatggg 300  
 ggtttctcag aagatgaaga taacatcatt tgtagcctct atgcaagcat tgggaagcatg 360  
 gtgtctataa ttgca 375

<210> 1980  
 <211> 749  
 <212> DNA  
 <213> Pinus radiata

<400> 1980  
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 ttaccattct gtgggcaaaa gcgagagagg aggagaatgg tgaggggaaa gaccagatg 120  
 aaaaggatcg agaacgacac gagcaggcag gttacgtttt ctaagcgag gaatgggtta 180  
 ctgaagaaaag cttatgagct ctctgtgctc tgcatgccc aagtgggact tataattttc 240  
 tcaccaagag ggaactata tgaattcgcc agtcccagca tggaggagat tttggaaaag 300  
 tataaaaaaac gttcgaagga aaatggcatg gctcagacaa cgaaagagca agatactcag 360  
 tattccaaac attccaaaca aaagctcgca aatatggaag aacagattag gattcttgaa 420  
 tcaacccaaa gaaagatgtt gggggaaggg ttggaatcgt gttcaatggc agaattaaat 480  
 aagttagaga gccaagctga acgaggattg agccatatac gggctcgaaa gacggaaata 540  
 ttggttgacc aaatagaatg tcttaaaaagg aaggaaacgtc tcttaagcga ggagaacgcc 600  
 ttactcagta gaaagtgggt tgatcgtaa tccgtggacg gttccgggtc aacatcatct 660  
 tcaattggat tgggaagcat cgagcagatc gaagttgaga cacaactggt tataagaccg 720  
 ccaaatgcac aggatcactg ttctgtaaa 749

<210> 1981  
 <211> 339  
 <212> DNA  
 <213> Pinus radiata

<400> 1981  
 cttggctggg gaagacaacc cgctgcatta cggacattta gccagagatt gtgcaagggt 60  
 ttcaatgagg cagttaatgg cttcacagat gatggatggg ctttgatggg taacgacgga 120  
 atggaggatg taactattct cgtcaattca tctccaagca aactgttcgg tcaacagttt 180  
 gcttcttccg atgggcttcc tgctcttggg gggggcatcc tatgtgcca ggcttctatg 240  
 ctattacaga atgttctctc agcattgctt gttcgtttct tgcgagaaca tcgatcagaa 300  
 tgggcagata gtaatatga tgctattca gcagcctct 339

<210> 1982  
 <211> 373  
 <212> DNA  
 <213> Pinus radiata

<400> 1982  
 ggattccgac ccttccggct aaagctgctt catttctgtg tgtattgaag atggggagat 60  
 ctccctgctg tgaaaaagct catacaaaaca aaggggcgtg gaccaaagaa gaggacgatc 120  
 gcctcatcgc ccacattcga actcacggcg aaggttgctg gcgctcgctt cccaaggccg 180  
 cagggtgat gcgctgcggg aagagctgca ggctccgatg gataaactac ctgcgtcctg 240  
 atctgaagcg tggaaaacttc tcagaagaag aagacgaact catcatcaaa ctccactccc 300  
 tactcgga caagtggctt cttattgcag gcagattgcc cgggcggacg gacaacgaga 360  
 taaagaacta ctg 373

<210> 1983  
 <211> 404  
 <212> DNA  
 <213> Pinus radiata

<400> 1983  
 aggcaataag tggtattatt gagaacttga ctgtggctga gattttcagg gatggaccgt 60  
 tcaaaactctg cgactggaga agaagatgta ctgtcaagat gcagggaag aaaacgtttc 120  
 atgaagctgg caattgagaa caggtataaa cttagcaacag ctcatgtggc ttacatggat 180  
 tctcttaggc gtatgggcac cggctctcgg ctttttgctg aaggcgaaac gatgtcggag 240  
 tcttcttatt ccacatcacc catagggact tctgaacttg ctgttgctt gcctgagaaa 300  
 tccgtatccc catctccatt tccatcctca tccccttcac tttctcaacc tcaaagtccc 360  
 cgttcagaga gagcagaatc tcgatctcca ctgcacagct tctc 404

<210> 1984  
 <211> 332  
 <212> DNA  
 <213> Pinus radiata

<400> 1984  
 cggacggctt ggttcaaaac tctcgtgaaa gaaaaaaagg cgttccttgg acggaagaag 60  
 aacataaaat gtttttatta gggcttcaca aattgggaaa aggcgactgg agaggtattt 120  
 ccagaaactt tgtcacttcc agaactccta ctcaagttgc tagccacgca caaaaatatt 180  
 ttcttaggca gagtaatttg aacaaaagga aacgaaggtc gagcctgttc gatatatcca 240  
 ctgattcgat ggaagattgc tatcaaggaa tcccggagct gtcaccggtg atgcacgac 300  
 tcagcctggg ccagaattca tctctgacct ct 332

<210> 1985  
 <211> 526  
 <212> DNA  
 <213> Pinus radiata

<400> 1985  
 ctctctctcc gtctccaaac ccaagctaag gaaaggcctc tggctgcctg aggaggatga 60

taaactcatc	aactacatga	tgaaaaacgg	ccagggttgc	tgagagcgatg	tcgccaagca	120
agctggtctg	cagagatgcg	gaaaaagctg	taggctgagg	tgatttaact	atttaaggcc	180
cgacctcaaa	cgcggtgcat	tttcacccca	ggaagaacaa	ttgatcatac	acttgcattc	240
cattctcggc	aacagggtgg	ctcagattgc	agcccgtttg	cccggacgta	cggacaacga	300
gatcaagaat	ttctggaact	cctgcataaa	gaagaagttg	aaacaccttt	cggcctccac	360
caacaacagt	aaatctatct	ctgcaccta	tcgtaccagt	accatgaatt	catcgatcac	420
gcccttttct	gaatcgctg	ccgagccatt	ggagggtcatg	gcaacaaggt	atcagccatc	480
gaatgctttt	aatcatgaag	tgcccactgc	agaaaatcaa	gtttttg		526

&lt;210&gt; 1986

&lt;211&gt; 366

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1986

atcagactca	catcaaacga	aactggagcc	gtgaagggtt	agttgcggtg	ttaaattcta	60
ggacagcttt	cogtattaga	aagaggcgcc	ctttacggga	gtcggcacca	aaccagagt	120
gagagaaata	atgggtaggg	ctccctgctg	cgaaaagggt	gggtcaaga	agggccctg	180
gacgccggag	gaagatcaaa	agctcctcgc	ttacatacag	gagcacggcc	atggcagctg	240
gagggctctg	cctcagaaag	ctgggttgct	aagatgcggg	aaaagctgca	gattgcgttg	300
gactaactat	ctaagaccag	atatcaagcg	gggaaagtcc	aaccacagg	aagaacagac	360
aattat						366

&lt;210&gt; 1987

&lt;211&gt; 476

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1987

ccgaactccc	cgctgtgatc	aaatgggatt	aaaaaaggga	ccctggacac	ctgaagaaga	60
tcaaatactc	atctcctata	tcaacaagca	tggtcatgga	aattggcgtg	cgctgccccaa	120
gcaagcagga	cttatgcat	gtggaaagag	ttgtcgccctg	cggtggacaa	actatctgag	180
acctgacata	aaacgtggga	acttcagtct	caaggaagag	cagactatta	ttcatctgca	240
tcaaatcctt	gggaaccgat	ggtcagctat	tgccctcacac	ctccccggaa	gaacagataa	300
tgagataaaa	aatgtatgga	acactcattt	gaaaaaacgc	ctcctgcaaa	ttggggtaga	360
cccagtaaac	cacgcgccta	gaggatacaa	tgatcttaac	tgttacaccg	ctgtgaatat	420
ccgggaccat	catggcgagc	aggccgatca	tcagctccaa	agccatgtct	gcgttt	476

&lt;210&gt; 1988

&lt;211&gt; 151

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1988

ggacacctga	ggaagatcga	attcttatct	cctatataaa	aaggaatggc	catggaaagt	60
ggcttgact	gccgaaacaa	gcaggactta	gccgatgcgg	gaagagttgt	cgactgcggg	120
ggacaaacta	tctgagacc	aacataaaac	g			151

&lt;210&gt; 1989

&lt;211&gt; 461

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1989

gtaacccatc	aggagtcttc	ttctgtccaa	ccccctaac	tctccacttc	acagatctca	60
tgagacttaa	cctgttctaa	cgttgcaggg	caataaccct	ctttgtctct	tggtctgtat	120
tttttgcttt	ttgaccacag	agcagggtca	acaagcttgt	acaaaggacg	cactgaaaaat	180
gaaggatttt	tactgcagct	tatgttaaag	tttattttat	ataaacgatg	ggaactgggg	240
aagaagcaac	gccaaactaag	cctgctgcca	aaccatcttc	ctcctcccag	gagacaccga	300
caacacctgt	ttatccagat	tgggcagctg	ctttccaggc	atattatggg	ccagggtgcta	360
ccccacctcc	tcctgccttt	tttgcttcaa	cagtgggatc	tgaccaact	ccacatccat	420

acatgtgggg tggacagccg ttgatgccac cttatgggac t 461

<210> 1990  
 <211> 418  
 <212> DNA  
 <213> Pinus radiata

<400> 1990  
 gtagattcct tgtctatcaa gaggggtgcac aagggtttgtt ttttaagaaca cagacaggca 60  
 gacagacaga gacgtgatca tggggcgagg gaagattgaa ataaagaaaa tagatgatgt 120  
 aacgagcaga caggtaactt tctcaaagcg caagatgggg atattcaaga aagcccacga 180  
 gctgtctgtt ttatgcgatg cagaggtggc tgttctcatc ttttcaaaca ccggaaggct 240  
 ctacgactat gctagttcaa ggtgtatgga acgaactatt gagagatatg aaaaatgtac 300  
 caaagcaatt aattgcccaa catcagatcc cattgtcgag aataagagcc caattcagga 360  
 aggcattgaa atattgaggc agaaacttcg tgcattacaa agattgcaaa gaaatctg 418

<210> 1991  
 <211> 321  
 <212> DNA  
 <213> Pinus radiata

<400> 1991  
 actaaagcag ctataaagag actgcagtct cagataatgg ttgcattcca ggcagttgat 60  
 acaacttctg cagcaattct gaaattgaga gaagatgaac tctatcctca actcgtggag 120  
 ctatctaaag ggctaattgca gatgtggagg gccatgtatg aatgccacca ggtccaaaat 180  
 catattgtcc aacaggtgag gcatttgggc aatctggcaa gcgcagaggc cacaagtagt 240  
 taccatcagc aggcaaccat tcaattggaa gctcaggtga ctgcttggta tgacagtttt 300  
 tgtagaatga taacgagcca g 321

<210> 1992  
 <211> 390  
 <212> DNA  
 <213> Pinus radiata

<400> 1992  
 gagaaaaacct aagtcctctc gcagcaagca agccacgcat tccctctcta cgactcgggt 60  
 ttggtgtaga aggcagagat ttactttgtt tctgcttgtt tgtegggtctt caccttcacc 120  
 ttcagacaac atttgtctga accgcggaac tagctcttga aatattgaaa cccacctaaa 180  
 tcgcagggga ttggtggatg ttagcagtggt tcacagagcg gtagagctag ggaaaatcca 240  
 tatacaacta catacacaga taccattat cagccatggg cgctccgaag caaaaatgga 300  
 catcagaaga agaaggtgct ctgcgagcgg gcgtggagaa gtatggcgcc ggcaagtggc 360  
 agaccattct caaggaccca gagttcgct 390

<210> 1993  
 <211> 476  
 <212> DNA  
 <213> Pinus radiata

<400> 1993  
 gcagtgggtca tatggatggg ggatccggag aggaccaaga tgccgccgat caagatcacg 60  
 atcacgatca cgatcatgat cacgagcagc agcagacgcg gaggaaacgt taccacagac 120  
 aactgctcg tcaaattcag gagatggaag cgttggttaa ggagtgtcca catcctgatg 180  
 acaaacaaag gcagcggtc agcattgaat tgggccttaa gccgcggcag gtgaaattct 240  
 ggtttcaaaa tcggcgctact cagatgaagg ctcaacagga tcgctcagac aacgccattc 300  
 tccgtgcaga gaatgaaaat ctgcggaacg agaacgtagc actccgagaa gcaattaaaa 360  
 atggtgcttg tccaaactgc ggagggtcta catcgctggg agagatgcct ggattcagcg 420  
 aacaccattt ccgtatagag aatacgcgct taaaggagga gcttgatcga gtgtct 476

<210> 1994  
 <211> 429  
 <212> DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1994

gataaaactga	gtgagcaaaa	ttactcagaa	agaaggaaga	gcagaacaat	tcgcccggag	60
gaatggggttg	cacacaaggg	caacgacaag	gggaatggga	agggaaaagg	gtcccctcga	120
attcctcaag	gcgaagtcta	agaaaagggtc	tctgggtcacc	ggatgaagat	atagaactta	180
ccacctatat	catgagaaaag	ggcctcatgg	gctgctggaa	ctatatcgcc	aagcaggctg	240
gtctgcagag	atgtggaaaag	agttgcaggc	tgagatggat	taactacttg	cgacctgggtc	300
ttaaagcttg	tgcaatttca	ccccaagaag	agcgactgat	aatacagtta	caatccagtc	360
tcggtaacag	gtgggtctcaa	atcgcgggcac	atttaccggg	acgcacagac	aatgaggtca	420
agaattact						429

&lt;210&gt; 1995

&lt;211&gt; 321

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1995

agcgcgctctc	tgtgaaaatg	gggagatctc	cgtgctgtga	gaaggctcac	accaacaaaag	60
gtgcctggac	ccaacaagaa	gatacccgcc	ttgtcgcca	cattcgagcc	catgggcaag	120
gcggtctggag	ctcgcttccc	aaggcagcag	gactgctgcg	ctgtgggaag	agttgcaggc	180
agcgatggat	aaactacctg	catccagatc	tgaagcggag	taacttttca	gaggaagaag	240
atgaactcat	cgtcagactc	cattcgctcc	tgggaaacaa	gtgggtctctt	attgcgggga	300
gattgccggg	gaggacagac	a				321

&lt;210&gt; 1996

&lt;211&gt; 402

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1996

ccgcctccta	ccggggcgca	ccgacaacgc	tatcaagaac	cactggaact	cgactctgcg	60
acgtcgctat	catggcgaga	aagaccagag	caacgggcta	gctgtgaact	tggagtctggc	120
agctgaggac	aaagaaacga	tgactccgat	gacacctgtc	acagccacgg	caacggcaac	180
ggcaacggca	atgccagtg	ctttagtgtt	cccaacggct	gcagacaacg	tcaggaagcg	240
gagcaacagt	agctgcagcg	ctaatagcaa	tccaggagat	gccgaggctg	aatcctgtag	300
gcttaagagg	ctcaattttt	ctgaatcccc	atctagtctt	gaaaatatta	ataataataa	360
caataatgaa	gaagctgtta	gtggccattg	caattcggcc	gc		402

&lt;210&gt; 1997

&lt;211&gt; 375

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1997

ttagcttgca	gaaaatgagg	tgcaaaacag	ggcaggcaca	agggcgattg	gaagttgaag	60
gcactcacc	tgctccttcc	aaaccaaagt	taagaaaagg	tctctggtca	cctgttgaag	120
ataaccagct	caccaactat	atcctgagaa	gaggcctcgt	cggctgctgg	aactatgtgg	180
ccaagcaggc	tgggtctgcaa	agaaccggaa	aaagttgtag	gctgagatgg	attaactact	240
tacgccctgg	ccttaaacgt	catccaattt	cacgccaaaga	agagcagctc	atcatagaat	300
tacaatccat	tctcggtaac	aggtggtctc	aaattgcggc	acagttgccg	ggacgcacgg	360
acattgagat	caaga					375

&lt;210&gt; 1998

&lt;211&gt; 466

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1998

acaacagctt	gaatctagtc	gaataaagct	gaaacaaatt	gaacaagagc	ttgagcgagt	60
gaagcaacag	ggaatttcca	tcaatggaca	tttgggcgat	cataatggat	caggggctgc	120

tgcatttgat	atggaatatg	gccgttgggt	tgaagaacaa	aacagacaag	cccgtgagct	180
cagggcttct	ttacaagcac	acctgacaga	tagcgaactt	tgtgttctgg	tggataatgc	240
tatagctcat	tatgatgaac	tctttcgtat	gaagggtgct	gcttccaagt	tggatgtttt	300
ccatcttatg	tcaggcatgt	ggaaaactcc	tactgagcgt	tgttttatgt	ggatgggagg	360
ttttcggcca	tcagagcttc	tgaagattct	tactccacaa	attgagcctt	taacagaaca	420
gcaatcattc	gcagtatcta	gcttgaaact	gtcatcacag	caggca		466

&lt;210&gt; 1999

&lt;211&gt; 243

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 1999

ctgagagtta	agtgattggt	gggagggaaa	agagaaaaaa	gaggagatca	agaatggtga	60
ggggaaaaat	ccagatgaag	aggattgaga	atacggccag	caggcagggt	acattttcca	120
agcgtagaaa	tggattgctg	aagaaagctt	acgagctctc	ggttctctgc	gatgcagaag	180
ttgacttat	gattttctcg	ccaggaggaa	agctctatga	attcgccaat	accagcatgg	240
aga						243

&lt;210&gt; 2000

&lt;211&gt; 642

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2000

cgagcgcgaa	agactgaaat	attggtgact	gaaatagagc	aacttcaaag	aaaggaatgg	60
atattaagcg	aggagaatgc	tttcctcggc	aaaaagttcg	tgcatectca	ttccgtttcg	120
aaaactcctg	gaagtgaatc	gggaagcatc	caaaacagtg	aagtcgagac	gcaactgggt	180
atgagaccgc	catgtacaaa	tgctcatttt	cttattaata	gttctcattg	ataatcaatg	240
tattcgtaac	tgtgttatca	atattattatg	aaaattttat	attaataaaa	ggtaaagctg	300
cttctcatat	cgcacctaat	tgttcaccac	gtccaaaaaa	aggctcttgc	caagtgaact	360
aaatgttttt	tgaaccgaag	tctgtcttcc	aaactcagta	tgtaagcttg	ctatgaatac	420
atactttaaa	ggttttgtat	tagcattacg	agcggagttt	tcctcattca	tccgatgagc	480
atgaagagtg	aggagtataa	tattgacgca	tgtggagaat	ttaatgttgc	atatactcct	540
acgtgtatat	atgtgatggt	ttatatatat	atatatatat	atataatata	gatttgaatc	600
tataaaatft	taaattatat	atntagttta	aaaaaaaaaa	aa		642

&lt;210&gt; 2001

&lt;211&gt; 485

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2001

gagagagtct	gcaaactgcg	cgtcccgcgt	cgccgatcgc	cgggagaatc	gccgcggcg	60
agatatgggg	aaccagaagc	tgaagtggac	gaaggaggag	gaggaggcgc	tcctcgccgg	120
aatcgccaag	cacggcgccg	gcaagtggaa	gaacatcctc	aaggaccccg	aattcgcccc	180
cgcctcgtc	aatcgctcca	acatcgacct	caaggacaag	tggcgtaact	tgagcgtcgg	240
tacttctgga	caaggttcta	gagataaaca	aaggctgtca	aaagtgaaaa	gtctgatggc	300
cgctcctcag	tccagtaccg	tgctctctaa	tccacaagct	catgctgcat	ctactgatgt	360
tgcattgggtc	aattcttcaa	atagctttca	agatggcaaa	aattattcac	tgtgggtatc	420
tgtgctcctt	ttccttttca	gtaacggcaa	tcttttttac	ttctatcctt	tgttatcctt	480
tctgt						485

&lt;210&gt; 2002

&lt;211&gt; 356

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2002

cgactcgtca	gtcagctcgt	gcactccttg	caattcatga	ttattttctcc	cgacttcggg	60
cccttagttc	cctctggctt	gcccgtccaa	gagaatgaag	aggctcatgg	ctatgcaggc	120



tgacatgtac	attggtgata	tttaggaagc	tatcagtttt	gaagtagttt	cggacctaga	180
actggtttat	ttctagtttt	cttcattttt	tttttctttg	gctataatta	ttttttcttt	240
cttagacacg	aagtccacaga	gaattgattg	atggtatgct	aagctatcat	aggttgggat	300
tgcattgttc	tcattgaaga	tactgctaata	tgtgtaggca	ctcctgttca	ttagtc	356

&lt;210&gt; 2003

&lt;211&gt; 713

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2003

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&lt;210&gt; 2004

&lt;211&gt; 341

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2004

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&lt;210&gt; 2005

&lt;211&gt; 1403

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2005

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 <213> *Eucalyptus grandis*

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<210> 2007  
 <211> 252  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 2007						
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cggcaagctc	tatgagttct	gcagcagccc	tagcatgtct	aaaacgctcg	accgttacca	180
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<210> 2008  
 <211> 386  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 2008						
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<210> 2009  
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 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 2009						
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tca						123

<210> 2010  
 <211> 581  
 <212> DNA  
 <213> *Eucalyptus grandis*

<400> 2010

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&lt;210&gt; 2011

&lt;211&gt; 538

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2011

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&lt;210&gt; 2012

&lt;211&gt; 341

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2012

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&lt;210&gt; 2013

&lt;211&gt; 934

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2013

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934

&lt;210&gt; 2014

&lt;211&gt; 372

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2014

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&lt;210&gt; 2015

&lt;211&gt; 411

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2015

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&lt;210&gt; 2016

&lt;211&gt; 356

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2016

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&lt;210&gt; 2017

&lt;211&gt; 356

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2017

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&lt;210&gt; 2018

&lt;211&gt; 495

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2018

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&lt;210&gt; 2019

&lt;211&gt; 613

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2019

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&lt;210&gt; 2020

&lt;211&gt; 564

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2020

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&lt;210&gt; 2021

&lt;211&gt; 410

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2021

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&lt;210&gt; 2022

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 <212> DNA  
 <213> Eucalyptus grandis

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<210> 2023  
 <211> 380  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 2023  
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<210> 2024  
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 <212> DNA  
 <213> Eucalyptus grandis

<400> 2024  
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 ggcagtttga cggccaagcc ga 322

<210> 2025  
 <211> 387  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 2025  
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<210> 2026  
 <211> 450  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 2026  
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aatggggcag	ttgcacatgt	tccacctcct	cgtcctaaac	gcaaagctgc	tcatccctac	360
cctcaaaagg	catcgaaaaa	tgttttagtg	ccgctgcaag	catccatggc	ccagccttct	420
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&lt;210&gt; 2027

&lt;211&gt; 786

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2027

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tcaaca						786

&lt;210&gt; 2028

&lt;211&gt; 476

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2028

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catcgctcatc	tgtgatcggt	catgcagtag	atgatggatt	ggacaagaag	tttgaatatg	360
tttctcatga	atcggcagaa	aattccagct	ccaggagcga	tcaagaagca	aatagacctg	420
acaaggtaca	gagacgtcta	gcacagaacc	gtgaagctgc	tcgaaaaagc	cgtctg	476

&lt;210&gt; 2029

&lt;211&gt; 535

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2029

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gttgacgcg	aagaagcgct	gagttcttgg	tcaaagtcta	gcagtttccg	ggtctccatc	180
aatcgagtcg	gagtgggagg	tatgaactct	ccttttagccc	agcttggtta	cccaagaagg	240
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aagggttaaaa	atcttgaggc	atcgctcatct	gtgattgtgc	atgcagtaga	tgatggattg	360
gacaagaagt	ttgaatatgt	ttctcatgaa	tcggcagaaa	attccagctc	caggagcgat	420
caagaagcaa	atagacctga	caaggtacag	agacgtctag	cacagaaccg	tgaagctgct	480
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&lt;210&gt; 2030

&lt;211&gt; 723

<212> DNA  
<213> Eucalyptus grandis

<400> 2030  
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ttactcaaaa atcagttttt acccttttct gttgcgtagt cgtagttttg ggccaggggt 180  
tctattcggt atatgtagag aagtcagtg gcgaaaccga gcgtcgagcg gtcggccatg 240  
gcttctctct cttctgtagc ttccgcgagg aaggacgcgg atcggatcaa ggggcccgtg 300  
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aaccagctct cgccccagg ggaacaccgc cccttcaccc cggaggagga cgaggccatc 480  
gtccgcgccc acgccagggt cggcaacaag tggggccacca tcgctcgct cctcaacggc 540  
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ccg 723

<210> 2031  
<211> 412  
<212> DNA  
<213> Eucalyptus grandis

<400> 2031  
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agggattcaa ggaagatggc gaaagagaag ataaagataa agaagataga caacttgacg 180  
gcgaggcagg tgacattctc gaagaggaga agagggtga tcaagaaggc cgaggagctc 240  
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gatttctcca gctccaggca gatgaaggga gaggatctgg aggggttaaa cgtggaggaa 360  
ttggaccaat tagagaagaa actcgaggcg ggactgagcc tcgtgatcaa ga 412

<210> 2032  
<211> 495  
<212> DNA  
<213> Eucalyptus grandis

<400> 2032  
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tcgcctgaag aggacgacaa gttgatgaac tacatgctca acaatggcca aggtgctgg 180  
agcgatgtgg cccggaacgc cgggctgcag cgggtgtggca agagttgccg cctccgggtg 240  
atcaactact tgccggcccga cctcaagagg ggcgctttct ccccaacaaga ggaggagctg 300  
atcatccact tgcattccat ccttggcaac aggtggctcg aaatcgcgcc tcggttgccg 360  
ggacggactg acaacgaaat aaagaacttt tggaaactga ccataaagaa gaggtcaaga 420  
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cgttaaagat gtatg 495

<210> 2033  
<211> 220  
<212> DNA  
<213> Eucalyptus grandis

<400> 2033  
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gggcccctcg ggagcttcga ggacttcgga tcggaggatg atctactcag cacctacatg 180  
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<210> 2034  
<211> 445



&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2034

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caaattgccaa	ccctgtgagc	atctttgcaac	ctgggtgtagt	gccacctgaa	gcctgggttac	180
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ttctttctgct	tgtttcttca	agttgctctc	tacaatatca	tcgactttgt	ttctcaaaat	300
tcgctttgtg	taagaatgaa	agagaactga	aaagggagag	gaggaaacag	tcgaaccgtg	360
aatctgctag	aagatcaaga	ctgaggaagc	aggctgagac	tgaagaactt	ggcaaaaagg	420
tggattctct	gagtgccgag	aatag				445

&lt;210&gt; 2035

&lt;211&gt; 349

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2035

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aaggaaacttc	atccaatggc	gatggaaaat	ctgaagtgc	aggaaagggt	gctggggagg	120
tggatgctgc	ttctgagaat	gtgtccggtg	gagccatcga	acgtcccaga	gccacaggaa	180
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gcatggatgc	aaatgccaac	cctgtgagca	ttttgcaacc	tggtgtagt	ccacctgaag	300
cctgggttaca	gaatgaaaga	gaactgaaaa	gggagaggag	ggaacagtc		349

&lt;210&gt; 2036

&lt;211&gt; 648

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2036

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ccgccaacac	gcaccaaccc	aacaacgccc	acgcggacga	agtacaactc	gtcctcgtcc	600
tccccgtcgg	cctgtccgcc	gagaactggt	gctccggcag	ggacgagt		648

&lt;210&gt; 2037

&lt;211&gt; 268

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2037

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gaagaagaac	ttattatcag	aatgtataag	ctcgtgggca	acagggtggc	attgattgct	180
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aatgctgcac	ctctgaagcc	taatacct				268

&lt;210&gt; 2038

&lt;211&gt; 1055

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2038

ggcgaatcga	gctccagtct	ctgcccttag	gcacacgtac	aacatacgtg	gctaacagag	60
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ttctccaact	ttatctctag	gaagatccct	gcaaccagtg	gaagcagttc	ttgaagagaa	1020
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&lt;210&gt; 2039

&lt;211&gt; 167

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2039

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tttgacacaa	ttgatgcac	ttttgtgat	gatgctcctc	tggtccctc	tggtttccga	120
gtaattcctc	tagaatcggg	atcagaatgt	ttctcctcca	aaacgga		167

&lt;210&gt; 2040

&lt;211&gt; 357

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2040

ggagtgttga	aattcccctg	ttttgatctg	ataactatga	atctgatgga	gtcttttgag	60
gcaaagggaa	agggagagaa	gaggagaacg	gtgaggggga	aaaccagtt	gaagagaatt	120
gagaacggga	ccagcaggca	ggttactttt	tgtaagcgca	ggaatgggtc	gctgaagaaa	180
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gggaagctgt	atgagttcgc	taatcccagc	atgcagaaaa	tggttgaacg	atacgaaaaa	300
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&lt;210&gt; 2041

&lt;211&gt; 438

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2041

ccgaagcaag	atcagaaact	cgttacttac	atacaggagc	atggccatgg	cagctggagg	60
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gaagccgaat	cgaaggct					438

&lt;210&gt; 2042

&lt;211&gt; 319

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2042

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ggagccctag	catttgatat	ggagtatgct	cgttgggttg	atgagcatca	tcgacagata	120
aatgaactga	ggtcagcagt	gaactcacat	gtgggggaca	atgagctgcg	tggtctgggt	180
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gatgtctttc	atctgggtctc	tggcatgtgg	aagacgcctg	cagaaagatg	cttcatgtgg	300
atgggaggat	tccgtcctt					319

&lt;210&gt; 2043

&lt;211&gt; 404

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2043

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gccatgaaag	tcccgcagtc	acccaattcg	atgcctctgg	cagccgccac	cctcgcaatg	180
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aataacccaa	ccccttcaat	gggaatggga	gatgaaatga	attgaagaaa	gtgaacttaa	360
aaaaaaaaa	aaaaaaactc	gagactagtt	ctctctctct	cttc		404

&lt;210&gt; 2044

&lt;211&gt; 379

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2044

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tgcttgcact	gatgatgaaa	cgaggatggg	cagcagcagc	tgcaacatgt	gggtggataa	360
atatagctct	ctcaaatct					379

&lt;210&gt; 2045

&lt;211&gt; 369

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2045

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ctgacctcg						369

&lt;210&gt; 2046

&lt;211&gt; 530

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2046

ctttccaata	ttgagcccaa	gcaaatcaaa	gtttggtttc	agaatcgaag	gtgccgagag	60
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aagttgctca	tggaggagaa	cgatcgccct	cagaagcaag	tttcacagtt	ggtgtatgag	180

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&lt;210&gt; 2047

&lt;211&gt; 358

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2047

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&lt;210&gt; 2048

&lt;211&gt; 376

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2048

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ttcatttcg	tggttgtaac	agatgggtcg	agattgcctc	gtttctgcct	gggcgaacgg	240
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tcgacccccg	cgacgcacag	gctatttcag	aaacactacc	acagccagcc	cctgtagctg	360
agaataatga	tgtccc					376

&lt;210&gt; 2049

&lt;211&gt; 656

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2049

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&lt;210&gt; 2050

&lt;211&gt; 466

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2050

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ttctcgaaac	gcaagaacgg	attgctaaaa	aaggcattcg	agctttctgt	tctctcgcat	120
gctgaagtcg	cccttatcat	tttctcgga	actggcaaga	tcagcgagtt	tgcaagccac	180

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tgcagttgac	tgcactcata	tgattggaag	gttggtgaat	cacaattgaa	agcgttgcac	420
gagaggatgg	acaatttgaa	aaaacaggaa	cgaaacatgg	ttggtg		466

&lt;210&gt; 2051

&lt;211&gt; 390

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2051

gtttgaagta	gaattttacct	atcaattgctg	ttaaagatac	tctgttttcg	gccctgaacc	60
ctaccagggg	aacgcggcgc	catgtcttcg	aggagctgtt	cgttggtcgg	ccttaatggc	120
cacaattccc	gtacctgtgt	gggaagtggg	gtgatgctct	ttgggttcg	tctgacggat	180
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tcggatccgg	ctgaggttgc	cgtgaagggt	tttgatgggt	acgtctcgga	tgacctcggt	300
cattcatcca	gcaatgcccg	tgagaggaag	aggggagtg	cctggacaga	ggaagaacac	360
cggatgtttc	ttgtcggcct	tcagagagtc				390

&lt;210&gt; 2052

&lt;211&gt; 312

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2052

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tggaaccaatg	agaaagagtg	ctagtatgaa	taatttgtca	aacttatctc	aatatgagca	180
ctcggatccg	gctgaggttg	ccgctgaagg	ttttgatggg	tacgtctcgg	atgacctcgt	240
tcattcatcc	agcaatgccc	gtgagaggaa	gaggggagtg	ccctggacag	aggaagaaca	300
cggatgttt	ct					312

&lt;210&gt; 2053

&lt;211&gt; 393

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2053

cgaggctcag	tccagctgag	gaggatcgaa	aacaaaatca	gtcgtcaagt	aactttttct	60
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tccagaaggc	atcttttggg	tgaagacctt	catcaactag	gtgctacgga	tctgcaacac	360
ttagaacaac	agcttgaaga	agcgttacaa	aag			393

&lt;210&gt; 2054

&lt;211&gt; 210

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2054

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aggatgccca	gcattatgga	gaagcaaaaat	agtgggtgaag	atagtgatag	caagggtcag	120
cttgataatg	gcaagtatgt	ccgttacacc	aatgagcagg	tgagagacttt	agaacgtgct	180
tataatgaat	gtctaaagcc	cagcacaagg				210

&lt;210&gt; 2055

&lt;211&gt; 385

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2055

aaaattgaga	atactacaag	ccggcaggtt	acattctgta	agcgggaagaa	tgggttgctg	60
aaaaaagctt	atgagttatc	tctgctgtgc	gatgcagaag	tggctctcct	cattttctcc	120
accagtggga	gactctatga	atttgcgaa	aagagtgtta	gcgcgacaac	ggagcggtag	180
atgagaacct	atgcagagaa	catgcctcag	tctcgagctc	tgtatccgga	ttgtcaccat	240
tggcaagagg	aagtcagaaa	acttacacag	caacgtgata	gtctaaccac	ttcgatcaga	300
caaataatgg	gtgaaggcct	tgaatcatta	agcatgaagg	agctcaagca	tattcaagtt	360
caattggaaa	aaagtattag	ttgtg				385

&lt;210&gt; 2056

&lt;211&gt; 545

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2056

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gcctgaaaga	agtactgctg	ccaaggatac	accaccaggt	tgtaaacacg	aagatcttct	480
gagctctgga	acagatagca	gtggggctct	ggatgaagat	agtcctcacc	atgttgactg	540
tggtc						545

&lt;210&gt; 2057

&lt;211&gt; 385

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2057

aaacttgctc	acggattccg	acccttccg	ctaaagctgc	tgcatttctg	tgtgtattga	60
agatggggag	atctccctgc	tgtgaaaaag	ctcatacaaa	caaaggggag	tggaccaaa	120
aagaggacga	tcgcctcatc	gccacattc	gaactcacgg	cgaagggtgc	tggcgctcgc	180
ttccaaggc	cgcagggtcg	atgcgctcgc	ggaagagctg	caggctccga	tggataaaact	240
acctgcgtcc	tgatctgaag	cgtggaaact	tctcagaaga	agaagacgaa	ctcgtcatca	300
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cggacaacga	gataaagaac	tactg				385

&lt;210&gt; 2058

&lt;211&gt; 436

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2058

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ccaagttgcc	agccatgctc	aaaagtacta	cattcgggctt	ggttcggata	ataaaaaacaa	180
gagaagatcc	agcatacatg	atatcaccac	tgttcattgg	acagacagga	tgctttctcc	240
tttactgcac	gtttctaata	ggcagactaa	ttccccctca	acacaggcag	aaatgaatca	300
ttcaccatgt	ctggacatat	ccatctcaga	tttcacgagg	acctctaata	aactctttgg	360
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agagaggggt	tggggg					436

&lt;210&gt; 2059

&lt;211&gt; 624

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2059

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ttcgacagag	caatatgact	agaa				624

&lt;210&gt; 2060

&lt;211&gt; 364

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2060

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gtct						364

&lt;210&gt; 2061

&lt;211&gt; 258

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2061

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tcttgaggga	aagtttct					258

&lt;210&gt; 2062

&lt;211&gt; 347

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2062

aacttgaggt	cactcacgtt	gaaagaattg	caacaactgg	aaaagcaatt	aggcagggct	60
ataaaaaaga	tttataataa	aaagatgaaa	ataatttcac	aatgttgcaa	atcattatca	120
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&lt;210&gt; 2063

&lt;211&gt; 267

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2063

tggaaggca	acatcgggat	ctgcaaatga	ggccatgtca	caaagtgggg	acagtggcgag	60
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aaagagaagt	tttgatcaaa	tgatagtaga	tggagccaat	gctcagagta	ccaatattca	180
atcatataat	tcccaggctg	gagaacccta	tgtgacttcc	ggcgggcatg	caatgggtaa	240
tcccattagt	caagctgttg	ctgcagt				267

&lt;210&gt; 2064

&lt;211&gt; 336

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2064

tcaacttaaa	tggaaggaac	ggatcttaac	cgaagagaac	ctttttcttc	gtaaaaagt	60
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&lt;210&gt; 2065

&lt;211&gt; 573

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2065

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&lt;210&gt; 2066

&lt;211&gt; 407

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2066

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&lt;210&gt; 2067

&lt;211&gt; 407

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2067

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<210> 2068  
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 <212> DNA  
 <213> Pinus radiata

<400> 2068  
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<210> 2069  
 <211> 393  
 <212> DNA  
 <213> Pinus radiata

<400> 2069  
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<210> 2070  
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 <212> DNA  
 <213> Pinus radiata

<400> 2070  
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 cataaatctt gtatgctaata ctggccgcta aaagagcgat ggaaaaatag ttgtcccatt 360  
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<210> 2071  
 <211> 373  
 <212> DNA  
 <213> Pinus radiata

<400> 2071  
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 taagaacta ctg 373

<210> 2072  
 <211> 506  
 <212> DNA  
 <213> Pinus radiata

&lt;400&gt; 2072

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ggacaaatta	cttgcgccca	gatttgaagc	gtggattatt	gtctgaatca	gaggagaagc	180
tcatcattga	tctacatgct	gccatagggg	ataggtggtc	acgaatcgct	gcgcaattgc	240
cagggagaac	tgataacgag	atcaagaatt	actggaacac	gaggatcaag	aagaaactgc	300
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ataatgagcc	tgatcctgat	cagaatcaga	gcagcaatgg	cactgtggag	acattgggtct	480
cgagggccag	agaacccccac	gaccac				506

&lt;210&gt; 2073

&lt;211&gt; 494

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2073

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&lt;210&gt; 2074

&lt;211&gt; 1678

&lt;212&gt; DNA

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2074

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<210> 2075

<211> 636

<212> DNA

<213> Eucalyptus grandis

<400> 2075

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<210> 2076

<211> 862

<212> DNA

<213> Eucalyptus grandis

<400> 2076

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<210> 2077

<211> 907

<212> DNA

<213> Eucalyptus grandis

<400> 2077

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 <212> DNA  
 <213> Eucalyptus grandis

<400> 2078						
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<210> 2079  
 <211> 373  
 <212> DNA  
 <213> Eucalyptus grandis

<400> 2079						
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<210> 2080  
 <211> 421  
 <212> DNA  
 <213> Pinus radiata

<400> 2080						
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<210> 2081  
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&lt;210&gt; 2082

&lt;211&gt; 244

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2082

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gcgg						244

&lt;210&gt; 2083

&lt;211&gt; 1151

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2083

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&lt;210&gt; 2084

&lt;211&gt; 372

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2084

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372

&lt;210&gt; 2085

&lt;211&gt; 1285

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2085

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&lt;210&gt; 2086

&lt;211&gt; 1218

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2086

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&lt;210&gt; 2087

&lt;211&gt; 473

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2087

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&lt;210&gt; 2088

&lt;211&gt; 1150

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2088

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aaaaaaaaaa						1150

&lt;210&gt; 2089

&lt;211&gt; 723

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2089

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&lt;210&gt; 2090

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 <212> DNA  
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 agtagaggag gaggaggacg agcatctggt ggaggtgtct cactcggtta cttcttttaa 660  
 tccacctccg cgtccgcctc cttcatccag cgaaccccca ccgctccgc tgctccgct 720  
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<210> 2091  
 <211> 479  
 <212> DNA  
 <213> Pinus radiata

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 tcaacatcaa cagctgttgt gtgaaatgag acgaatcacc aaagaaaatg aaagccttca 420  
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<210> 2092  
 <211> 557  
 <212> DNA  
 <213> Pinus radiata

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 cagtgttatg tgatgcagag gtagcactga taatattctc aagcagagga aaactctatg 180  
 agttcggaag cgccgggatg ctcaagactc tggagcgata tcaaaaatgt tcatatcgat 240  
 tgcaagacgc gactgtatcg gaccgggagg cgagaattg gcatcaagag gttggcaaat 300  
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 <211> 356  
 <212> DNA  
 <213> Pinus radiata

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 gaacgggacc agcaggcagg ttactttttg taagcgcagg aacgggtctgc tgaagaaagc 180  
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 <212> DNA  
 <213> Pinus radiata

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caaagagca	agatgtccag	tgtttaaac	gagaaagtgc	gaatatggaa	gaaaggattg	300
aaattcttga	atccatgcaa	agaaagatgt	tgggcgagga	gctggcatca	tgtgcattga	360
aggatttgaa	tcagttggag	agccaggttg	aacgaggttt	gaga		404

<210> 2095  
 <211> 584  
 <212> DNA  
 <213> Pinus radiata

<400> 2095						
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<210> 2096  
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 <212> DNA  
 <213> Pinus radiata

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 <212> DNA  
 <213> Pinus radiata

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&lt;210&gt; 2098

&lt;211&gt; 430

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2098

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&lt;210&gt; 2099

&lt;211&gt; 513

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2099

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&lt;210&gt; 2100

&lt;211&gt; 526

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2100

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&lt;210&gt; 2101

&lt;211&gt; 295

&lt;212&gt; DNA

&lt;213&gt; Pinus radiata

&lt;400&gt; 2101

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<210> 2102  
<211> 296  
<212> DNA  
<213> Pinus radiata

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<210> 2103  
<211> 475  
<212> DNA  
<213> Pinus radiata

<400> 2103  
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<210> 2104  
<211> 1612  
<212> DNA  
<213> Eucalyptus grandis

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 <212> DNA  
 <213> Pinus radiata

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 aaaggcaca ggaactcgtg tggaaagatg tttatagtgc aaagatctcc gacttgctta 840  
 tcgtggaatt gaaataatgt gttggagggc gcagagacgg tgggaaaaag gttttgtgtg 900  
 ttgcaggtct ggagatatgg tggggaagtg tatggataat aggtatttct ataatttgca 960  
 attctggtgc aattattcac aacagttagc atttatcaag gaaaaatata cttcgttttg 1020  
 tgttctcagt cgtaggagat ataccagtac cagtacatta tctgcttgca gggtaagttg 1080  
 aagttcatta cattgcaatg ccggtgcctt atcgccctca tggccgtatt tttaaagaca 1140  
 aatcccacgc tgettcagcc tgcaacaaga tatctttact ctcattacac tgatacatatc 1200  
 cactgggtcaa aacttcccat cactgtcata ggctggaaca gagaaactga agcctgttca 1260  
 aaattttcaa tacttttaga tctggtaaag aagccaatgt gagaactgca aatttcattg 1320  
 gggcaaaact caggtgtact gtcaaagcat gaaagtccag aatttgatgg tgggatattc 1380  
 aacatacggc agaggtaccc ccaatgatgt agaaagtatt gggctgggtg cctattacca 1440  
 cttgcagtgg tgtaggaaaa agtgtagttc tattgcagga gtgtaataaa tgaggtagat 1500  
 atttttctcc ccgattgatg ttcaatatag actcagcgac gttttatgtg tgttgaaaaa 1560  
 aaaaaaaaaa aaaaaa 1576

<210> 2106  
 <211> 210  
 <212> DNA  
 <213> Pinus radiata

<400> 2106  
 ctatgctatt acagaatgtg cctccagcac tacttgtccg cttcttgccg gaacatcgct 60  
 cagagtgggc tgattgtaac attgatgctt attcttcagc taccatgaaa gcaaattgctt 120  
 acaatgttcc aggttccactg ggaggcatta cagggagtc aagttatcctt ccactggcac 180  
 atactgtgga acatgaagag ttcttggaag 210

<210> 2107  
 <211> 27  
 <212> PRT  
 <213> Pinus radiata

<400> 2107  
 Met Lys His His Val Val His Asn Cys Cys Ser Lys Lys Ala Val Lys  
 1 5 10 15  
 Arg Gly Phe Trp Ser Pro Glu Glu Asp Leu Lys  
 20 25

<210> 2108  
 <211> 126  
 <212> PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2108

Gly Ile Ser Arg Asn Phe Val Lys Thr Arg Thr Pro Thr Gln Val Ala  
 1 5 10 15  
 Ser His Ala Gln Lys Tyr Phe Leu Arg Arg Thr Asn Gln Asn Arg Arg  
 20 25 30  
 Arg Arg Arg Ser Ser Leu Phe Asp Ile Thr Thr Asp Ser Tyr Phe Gly  
 35 40 45  
 Val Ser Ser Ser Thr Met Glu Gly His His Gln Ala His Gln Val  
 50 55 60  
 Pro Ser Phe Pro Leu Ser Leu Pro Pro Ala Val Ser Pro Gly Thr Gly  
 65 70 75 80  
 Glu Lys Leu Leu Glu Ser Leu Arg Leu Arg Lys Glu Gly Cys Gln Ser  
 85 90 95  
 Lys Pro Thr Pro Ser Lys Pro Ile Arg Pro Val Pro Ile Leu Pro Ile  
 100 105 110  
 Pro Pro Ser Ser Lys Met Ala Ala Leu Asp Leu Asn Lys Ala  
 115 120 125

&lt;210&gt; 2109

&lt;211&gt; 130

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2109

Met Pro Gly Phe Thr Arg Ala Arg Lys Met Ser Met Ser Gly Glu Glu  
 1 5 10 15  
 Glu Gly Asp Leu Arg Arg Gly Pro Trp Thr Arg Glu Glu Asp Asn Leu  
 20 25 30  
 Leu Ile His Ser Ile Thr Cys His Gly Glu Gly Arg Trp Asn Met Leu  
 35 40 45  
 Ala Lys Ser Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg  
 50 55 60  
 Trp Leu Asn Tyr Leu Arg Pro Asp Ile Lys Arg Gly Asn Leu Thr Pro  
 65 70 75 80  
 Gln Glu Gln Leu Met Ile Leu Glu Leu His His Lys Trp Gly Asn Arg  
 85 90 95  
 Trp Ser Lys Ile Ala Gln Tyr Leu Pro Gly Arg Thr Asp Asn Glu Ile  
 100 105 110  
 Lys Asn Tyr Trp Arg Thr Arg Val Gln Lys Gln Ala Arg Gln Leu Asn  
 115 120 125  
 Ile Glu  
 130

&lt;210&gt; 2110

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2110

Cys Cys Asp Lys Val Gly Leu Lys Lys Gly Pro Trp Thr Pro Glu Glu  
 1 5 10 15  
 Asp Gln Lys Leu Leu Ala Tyr Ile Glu Glu Asn Gly His Gly Ser Trp  
 20 25 30  
 Arg Ala Leu Pro Ser Lys Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys  
 35 40 45  
 Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Ile Lys Arg Gly Lys  
 50 55 60  
 Phe Ser Leu Gln Glu Glu Gln Thr Ile Ile Gln Leu His Ala Leu Leu  
 65 70 75 80

[illegible]

```
<210> 2111
<211> 99
<212> PRT
<213> Eucalyptus grandis
```

	<400>	2111													
Arg 1	Thr	Leu	Pro	Lys 5	Asn	Ala	Gly	Leu	Arg 10	Arg	Cys	Gly	Lys	Ser 15	Cys
Arg	Leu	Arg	Trp	Thr	Asn	Tyr	Leu	Arg 25	Pro	Asp	Ile	Lys	Arg	Gly	Arg
Phe	Thr	Phe	Glu	Glu	Glu	Glu	Thr 40	Ile	Ile	Gln	Leu	His 45	Gly	Val	Leu
Gly	Asn 50	Lys	Trp	Ser	Ala	Ile 55	Ala	Ala	Gln	Leu	Pro 60	Gly	Arg	Thr	Asp
Asn 65	Glu	Ile	Lys	Asn	Tyr 70	Trp	Asn	Thr	His 75	Ile	Lys	Lys	Arg	Leu	Leu 80
Lys	Met	Gly	Ile	Asp 85	Pro	Val	Thr	His	Ser 90	Pro	Arg	Leu	Asp	Leu	Leu
Asp	Leu	Ser													

```
<210> 2112
<211> 59
<212> PRT
<213> Eucalyptus grandis
```

	<400> 2112														
Met	Gly	Arg	Gly	Arg	Leu	Gln	Leu	Lys	Arg	Ile	Glu	Asn	Lys	Ile	Asn
1				5					10					15	
Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Arg	Ala	Gly	Leu	Leu	Lys	Lys	Ala
			20					25					30		
His	Glu	Ile	Ser	Val	Leu	Cys	Asp	Ala	Glu	Val	Ala	Leu	Ile	Ile	Phe
		35					40					45			
Ser	Ala	Lys	Gly	Lys	Leu	Phe	Glu	Tyr	Ser	Thr					
	50					55									

```
<210> 2113
<211> 79
<212> PRT
<213> Eucalyptus grandis
```

<div style="display: flex; justify-content: space-between; padding: 0 10px;"> <span>&lt;400&gt;</span> <span>2113</span> </div>															
Val	Lys	His	Asp	Val	Glu	Thr	Leu	Ser	Ser	Lys	Val	Lys	Met	Ala	Glu
1				5					10					15	
Glu	Thr	Val	Lys	Arg	Val	Thr	Gly	Leu	Asn	Pro	Met	Leu	His	Val	Met
			20					25					30		
Ser	Asp	Met	Ser	Ser	Val	Gly	Val	Pro	Pro	Phe	Asp	Gly	Ser	Pro	Ser
		35					40					45			
Asp	Thr	Ser	Ala	Asp	Ala	Ala	Val	Pro	Val	Arg	Asp	Pro	Lys	His	Gln
	50					55					60				

Phe Tyr Gln Thr Asn Ser Ser Asn Pro Ala Ser Ser Ala Asp Asp  
65 70 75

<210> 2114  
<211> 104  
<212> PRT  
<213> Eucalyptus grandis

<400> 2114  
Gln Val Ala Gln Leu Arg Val Glu Asn Ser Thr Leu Leu Lys Arg Leu  
1 5 10 15  
Ser Asp Ile Ser Gln Lys Tyr Asn Val Ala Ala Val Asp Asn Arg Val  
20 25 30  
Leu Glu Ala Asp Val Glu Thr Leu Arg Ala Glu Val Lys Met Ala Glu  
35 40 45  
Glu Thr Val Lys Arg Val Thr Gly Leu Asn Pro Met Leu His Val Met  
50 55 60  
Ser Asp Met Ser Ser Val Gly Val Pro Pro Phe Asp Gly Ser Pro Ser  
65 70 75 80  
Asp Thr Ser Ala Asp Ala Ala Val Pro Val Arg Asp Asp Pro Lys His  
85 90 95  
Gln Phe Tyr Gln Thr Asn Ser Met  
100

<210> 2115  
<211> 71  
<212> PRT  
<213> Eucalyptus grandis

<400> 2115  
Met Gly Arg His Ser Cys Cys Tyr Lys Gln Lys Leu Arg Lys Gly Leu  
1 5 10 15  
Trp Ser Pro Glu Glu Asp Glu Lys Leu Leu Arg Tyr Ile Thr Gln Tyr  
20 25 30  
Gly His Gly Cys Trp Ser Ser Val Pro Lys Leu Ala Gly Leu Gln Arg  
35 40 45  
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
50 55 60  
Leu Lys Arg Gly Thr Phe Ser  
65 70

<210> 2116  
<211> 55  
<212> PRT  
<213> Eucalyptus grandis

<400> 2116  
Glu Leu Gln His Leu Glu Gln Gln Leu Ser Gly Ala Leu Ser Ser Val  
1 5 10 15  
Lys Glu Lys Lys Glu Gln Trp Leu Leu Glu Gln Leu Glu Arg Ser Arg  
20 25 30  
Leu Gln Glu Gln Arg Ala Met Leu Glu Asn Glu Thr Leu Arg Arg Gln  
35 40 45  
Val Asp Glu Leu Arg Gly Phe  
50 55

<210> 2117  
<211> 62  
<212> PRT  
<213> Eucalyptus grandis

<400> 2117  
 Glu Ile Ser Val Leu Cys Asp Ala Asp Val Ala Leu Ile Val Phe Ser  
 1 5 10 15  
 Thr Lys Gly Lys Leu Phe Glu Tyr Ala Thr Asp Cys Cys Met Glu Arg  
 20 25 30  
 Ile Leu Glu Arg Tyr Glu Arg Tyr Ser Tyr Ala Glu Ser Gln Val Leu  
 35 40 45  
 Thr Asn Asn Ala Glu Thr Asn Gly Asn Trp Thr Leu Glu His  
 50 55 60

<210> 2118  
 <211> 49  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2118  
 Leu Phe Pro Pro Gln Ser Glu Gly Phe Phe Asn Pro Met Asp Gly Asn  
 1 5 10 15  
 Leu Ser Leu Gln Ile Gly Tyr Asn Pro Thr Cys Leu Asp Glu Met Asn  
 20 25 30  
 Ala Ser Val Ser Ser Gln Asn Val Ala Gly Phe Ile Pro Gly Trp Met  
 35 40 45  
 Leu

<210> 12119  
 <211> 195  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2119  
 Ser Gly Ser Gln Val Ser Ile Ile Met Ile Ser Ser Thr Gly Lys Leu  
 1 5 10 15  
 His Glu Tyr Ile Ser Pro Ser Thr Ser Thr Lys Lys Met Tyr Asp Gln  
 20 25 30  
 Tyr Gln Gln Ala Leu Glu Val Asp Leu Trp Ser Ser His Tyr Glu Lys  
 35 40 45  
 Met Gln Glu Asn Leu Arg Lys Leu Lys Glu Val Asn Lys Lys Leu Gln  
 50 55 60  
 Leu Glu Val Arg Arg Arg Phe Gly Glu Gly Leu Asn Gly Met Ser Leu  
 65 70 75 80  
 Ser Glu Leu Cys Gly Leu Glu Gln Asp Met Asp Asn Ala Val Ser Leu  
 85 90 95  
 Ile Arg Glu Arg Lys Tyr Lys Thr Leu Gly Asn Gln Ile Asp Thr Ala  
 100 105 110  
 Arg Lys Lys Lys Lys Asn Ala Glu Glu Ile Asn Lys Ser Leu Leu Gln  
 115 120 125  
 Asp Trp Thr Asn Leu Ile Lys His Leu Arg Glu Asp Asp Pro His Phe  
 130 135 140  
 Gly Met Val Asp Asn Gly Arg Asp Tyr Glu Ala Val Ile Gly Tyr Thr  
 145 150 155 160  
 Asp Ala Ala Ala Ala Arg Leu Tyr Thr Leu Arg Leu Gln Pro Asp  
 165 170 175  
 Gln Pro Asn Leu Thr Ser Gly Gly Gly Ser Glu Ile Thr Thr Tyr Pro  
 180 185 190  
 Leu Leu Glu  
 195

<210> 2120  
 <211> 92  
 <212> PRT



&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2120

```

Met Ala Phe Lys Ser Pro Gly Gly Ile Thr Trp Leu Lys His Leu Leu
 1          5          10          15
Val Lys Asn Phe Tyr Leu Gly Glu His Leu Lys Cys Arg Asn Gly Leu
          20          25          30
Ile Lys Lys Ala Tyr Glu Leu Ser Val Leu Cys Asp Ile Asp Ile Ala
          35          40          45
Leu Ile Met Phe Ser Pro Ser Asp Arg Val Ser His Phe Ser Gly Lys
          50          55          60
Arg Arg Ile Glu Asp Val Leu Thr Arg Phe Ile Asn Leu Thr Asp Gln
65          70          75          80
Glu Arg Thr Leu Leu Asp Val Gln Asp Arg Arg Thr
          85          90

```

&lt;210&gt; 2121

&lt;211&gt; 41

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2121

```

Met Gly Arg Gly Arg Val Gln Leu Lys Arg Ile Glu Asn Lys Ile Asn
 1          5          10          15
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala
          20          25          30
Tyr Glu Leu Ser Leu Leu Cys Asp Ala
          35          40

```

&lt;210&gt; 2122

&lt;211&gt; 96

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2122

```

Leu Gln Tyr Asp Trp His His Leu Ser Phe Cys Val Ile Ile Ser Val
 1          5          10          15
Leu Asn Leu Gln Asn Thr Ile Asn Gly Ser Cys Ser Met Glu Ser Ile
          20          25          30
Leu Glu Arg Tyr Glu Arg Tyr Thr Tyr Ala Glu Arg Gln Gln Val Ala
          35          40          45
Thr Asp Ser Pro Gln Val Gln Gly Ser Trp Ser Leu Glu Tyr Pro Lys
          50          55          60
Leu Val Ala Arg Ile Glu Val Leu Gln Arg Asn Ile Arg Asn Leu Ser
65          70          75          80
Gly Glu Glu Leu Asp Pro Leu Ser Leu Arg Glu Leu Gln Tyr Leu Glu
          85          90          95

```

&lt;210&gt; 2123

&lt;211&gt; 76

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2123

```

Phe Leu Phe Arg Arg Lys Gln Gly Ala Val Glu Glu Leu Lys Met Val
 1          5          10          15
Gln Glu Val Arg Lys Gly Pro Trp Thr Glu Gln Glu Asp Phe Gln Leu
          20          25          30
Val Cys Phe Val Gly Leu Phe Gly Asp Arg Arg Trp Asp Phe Ile Ala
          35          40          45
Lys Val Ser Gly Leu Lys Val Ala Gly Glu Asn Asn Arg Tyr Val Arg

```

50 55 60  
Phe Lys Ala Trp Gly Phe Phe Gly Arg Ser Tyr Phe  
65 70 75

```
<210> 2124
<211> 55
<212> PRT
<213> Eucalyptus grandis
```

	<400>	2124													
Met	Gly	Arg	Ser	Pro	Cys	Cys	Glu	Lys	Ala	His	Thr	Asn	Lys	Gly	Ala
1				5					10					15	
Trp	Thr	Lys	Glu	Asp	Gln	Arg	Leu	Ile	Asp	Tyr	Ile	Arg	Leu	His	
			20				25					30			
Gly	Glu	Gly	Cys	Trp	Arg	Ser	Leu	Pro	Lys	Ser	Ala	Gly	Leu	Leu	Arg
		35					40					45			
Cys	Gly	Lys	Ser	Cys	Arg	Leu									
	50					55									

```
<210> 2125
<211> 123
<212> PRT
<213> Eucalyptus grandis
```

<div> <div>&lt;400&gt;</div> <div>2125</div> </div>															
Val	Glu	Gln	Val	Gln	Phe	Leu	Glu	Lys	Ser	Phe	Glu	Val	Glu	Asn	Lys
1				5					10					15	
Leu	Glu	Pro	Asp	Arg	Lys	Ile	Gln	Leu	Ala	Lys	Asp	Leu	Gly	Leu	Gln
			20					25					30		
Pro	Arg	Gln	Val	Ala	Ile	Trp	Phe	Gln	Asn	Arg	Arg	Ala	Arg	Trp	Lys
			35				40					45			
Thr	Lys	Gln	Leu	Glu	Lys	Asp	Tyr	Glu	Thr	Leu	Gln	Ala	Ser	Phe	Asn
			50			55					60				
Thr	Leu	Lys	Ser	Asp	Tyr	Asp	Thr	Leu	Ile	Lys	Glu	Arg	Asn	Asp	Leu
					70					75					80
Lys	Ala	Glu	Val	Leu	Asn	Leu	Thr	Asp	Lys	Leu	Leu	His	Lys	Gly	Asn
				85					90					95	
Glu	Lys	Glu	Ser	Ser	Glu	Ser	Ser	Ser	Lys	Ser	Ser	Gln	Gly	Leu	Phe
			100					105					110		
Gln	Asn	Pro	Ile	Ala	Asp	Ser	Val	Ser	Glu	Asp					
			115				120								

```
<210> 2126
<211> 105
<212> PRT
<213> Eucalyptus grandis
```

	<400> 2126														
Met	Ala	Arg	Phe	Pro	Arg	Val	Asp	Lys	Ser	Asn	Ser	Lys	Lys	Thr	Val
1				5					10					15	
Lys	Lys	Gly	Ala	Trp	Ser	Ala	Glu	Glu	Asp	Gln	Lys	Leu	Val	Ala	Tyr
			20					25					30		
Ile	Lys	Arg	Tyr	Gly	Ile	Trp	Asn	Trp	Thr	His	Met	Ala	Glu	Pro	Ala
		35					40					45			
Gly	Leu	Ala	Arg	Thr	Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Met	Asn	Tyr
	50					55					60				
Leu	Arg	Pro	Asn	Ile	Lys	His	Gly	Asn	Ile	Thr	Gln	Glu	Glu	Glu	Glu
65				70						75					80
Ile	Ile	Ile	Asn	Leu	His	Arg	Val	Leu	Gly	Asn	Arg	Trp	Ala	Ser	Ile
			85						90					95	
Ala	Ser	Arg	Leu	Ser	Gly	Arg	Thr	Asp							

100

105

<210> 2127  
 <211> 115  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2127  
 Met Ala Arg Glu Lys Ile Lys Ile Lys Lys Ile Asp Asn Val Thr Ala  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Gly Leu Phe Lys Lys Ala  
 20 25 30  
 Gly Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Val Val Ile Phe  
 35 40 45  
 Ser Ala Thr Gly Lys Leu Phe Glu Tyr Ser Ser Ser Met Lys Asp  
 50 55 60  
 Thr Leu Glu Arg Tyr Thr Leu His His Asn Asn Leu Glu Asn Met Asp  
 65 70 75 80  
 Gln Pro Ser Leu Glu Leu Gln Leu Glu His Ser Asn Asn Met Arg Leu  
 85 90 95  
 Ser Lys Glu Val Ala Glu Lys Ser His Arg Leu Arg Gln Leu Arg Gly  
 100 105 110  
 Glu Asp Leu  
 115

<210> 2128  
 <211> 155  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2128  
 Met Gly Arg Lys Cys Ser Arg Cys Gly Asn Ile Gly His Asn Ser Arg  
 1 5 10 15  
 Thr Cys Thr Thr Phe Met Gly Ala Ala Ser Ala Cys Gly Leu Lys Leu  
 20 25 30  
 Phe Gly Val Gln Leu Asp Leu Ser Ser Ser Ser Pro Pro Ser Ser Ser  
 35 40 45  
 Ala Ser Ser Gly Ser Ala His Pro Tyr Ser Leu Val Ile Lys Lys Ser  
 50 55 60  
 Leu Ser Met Asp Arg Leu Ser Ser Ser Ser Ala Ser Ser Ser Ser Pro  
 65 70 75 80  
 Ser Ser Ser Leu Ser Ser Pro Arg Val Leu Ala Asp Glu His Cys Asn  
 85 90 95  
 Lys Thr Ser Leu Gly Tyr Leu Ser Asp Gly Leu Ala Ala Arg Ser Gln  
 100 105 110  
 Glu Lys Arg Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Thr Phe  
 115 120 125  
 Leu Met Gly Leu Glu Lys Met Gly Lys Gly Asp Trp Arg Gly Ile Ser  
 130 135 140  
 Arg Asn Tyr Val Thr Thr Arg Thr Pro Thr Gln  
 145 150 155

<210> 2129  
 <211> 145  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2129  
 Arg Gly Trp Arg Gln Ile Glu Glu His Val Gly Thr Lys Thr Ala Val  
 1 5 10 15  
 Gln Ile Arg Ser His Ala Gln Lys Phe Phe Ser Lys Val Ala Arg Gly

```

      20      25      30
Val Ser Gly Ser Ser Glu Gly Val Ile Lys Pro Ile Glu Ile Pro Pro
      35      40      45
Pro Arg Pro Lys Arg Lys Pro Met His Pro Tyr Pro Arg Lys Ser Val
      50      55      60
Asp Ser Lys Glu Val Lys Leu Ser Tyr Gln Gln Glu Arg Ser Pro Ser
65      70      75      80
Pro Ile Ser Ser Val Ala Asp Glu Asn Thr Gly Ser Pro Thr Ser Val
      85      90      95
Leu Ser Ala His Gly Ser Asp Met Leu Gly Ser Ala Ser Leu His Gln
      100      105      110
Gln Asn Arg Cys Ser Ser Pro Thr Ser Cys Thr Thr Asp Val Pro Ser
      115      120      125
Ile Gly Leu Ala Val Ile Glu Lys Gln Pro Glu Ile Phe Lys Glu Glu
      130      135      140
Asp
145

```

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<210> 2130
<211> 156
<212> PRT
<213> Eucalyptus grandis

```

```

      <400> 2130
Phe Gly His Glu Phe Thr Ser Ser Pro Ala Ser Ser Ser Ser Leu Ser
1      5      10      15
Ser Ser Arg Ile Ser Ile Gly Glu Asn Ser Asp Lys Ala Ser Leu Gly
      20      25      30
Tyr Leu Ser Asp Gly Leu Leu Gly Arg Ser Gln Glu Lys Lys Gly
      35      40      45
Val Pro Trp Thr Glu Glu Glu His Arg Thr Phe Leu Val Gly Leu Glu
      50      55      60
Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Ser Tyr Val Thr
65      70      75      80
Thr Arg Thr Pro Ala Gln Val Ala Ser His Ala Gln Lys Tyr Phe Leu
      85      90      95
Arg Gln Val Ser Phe Asn Lys Lys Lys Arg Arg Ser Ser Leu Phe Asp
      100      105      110
Met Val Asp Val Lys Thr Ala Ala Gly Asp Arg Leu Gly Ser Leu Thr
      115      120      125
Ala Lys Pro Ser Glu Ser Val Pro Asn Cys Lys Met Gly Thr Leu Met
      130      135      140
Ser His Leu Gln Val His Asp Ala Arg Thr Thr Gln
145      150      155

```

```

<210> 2131
<211> 49
<212> PRT
<213> Eucalyptus grandis

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```

      <400> 2131
Met Val Gln Glu Val Arg Lys Gly Pro Trp Thr Glu Gln Glu Asp Phe
1      5      10      15
Gln Leu Val Cys Phe Val Gly Leu Phe Gly Asp Arg Arg Trp Asp Phe
      20      25      30
Ile Ala Lys Val Ser Gly Leu Lys Val Ala Gly Glu Asn Asn Arg Ile
      35      40      45
Glu

```

```

<210> 2132

```

<211> 151  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2132  
 Asp Asp Val Cys Gly Gly Gly Lys Arg Pro Glu Arg Pro Phe Phe Cys  
 1 5 10 15  
 Thr Tyr Asp Gly Glu Glu Asn Gly Asp Asp Asp Tyr Asp Glu Tyr Leu  
 20 25 30  
 His Gln Pro Glu Lys Lys Arg Arg Leu Ser Ile Glu Gln Val Leu Tyr  
 35 40 45  
 Leu Glu Lys Ser Phe Glu Thr Asp Asn Lys Leu Glu Pro Asp Lys Lys  
 50 55 60  
 Val Gln Leu Ala Lys Glu Leu Gly Leu Gln Pro Arg Gln Val Ala Ile  
 65 70 75 80  
 Trp Phe Gln Asn Arg Arg Ala Arg Trp Lys Thr Lys Gln Met Glu Lys  
 85 90 95  
 Asp Phe Asp Lys Leu Gln Ala Ser Phe Asn Cys Leu Lys Ser Asp Tyr  
 100 105 110  
 Glu Ser Leu Leu Asn Glu Lys Glu Lys Leu Lys Ala Glu Val Ile His  
 115 120 125  
 Leu Thr His Gln Leu Glu Gln Arg Ser Asn Gly Ile Leu Asn His Ser  
 130 135 140  
 Thr Tyr Leu Asn Asn Cys Thr  
 145 150

<210> 2133  
 <211> 133  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2133  
 Met Gly Ser Arg Thr Arg Val Gly Gly Gly Gly Asp Asp Gly Arg Val  
 1 5 10 15  
 Val Asn Gly Met Pro Ser Phe Val Pro Gln Leu Pro Thr Ser Asn Ser  
 20 25 30  
 Met Gly Ser Glu Gly Asn Ser Ile Arg Ser Ser Arg Ile Thr Asp Phe  
 35 40 45  
 Gly Thr Leu Glu Gln Ser Leu Gly Tyr Arg Ile Glu Asp Ala Val Asp  
 50 55 60  
 Leu Ser Arg Asn Pro Val Phe Asn Gln Met Lys Ser Ser Ala Gln Ala  
 65 70 75 80  
 Leu Gly Ala Asp Val Gln Phe Gly Ser Leu Asn Lys Ser Leu Ser Ser  
 85 90 95  
 Ser Asp Arg Asn Leu Ser Val Asn Ile Val Gly Ser Gln Thr Leu Ser  
 100 105 110  
 Met His Arg Glu Ser Gln Ser Asn Leu Val Ser Ile Pro Gly Ala His  
 115 120 125  
 Arg Glu Asn Trp Gly  
 130

<210> 2134  
 <211> 150  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2134  
 Met Pro Pro Pro Arg Ala Ala Thr Pro Asp Val Ala Gly Asp Glu Ser  
 1 5 10 15  
 Ser Gly Ala Asp Ala Gly Ala Gly Glu Ile Met Leu Phe Gly Val Arg  
 20 25 30

Val Val Val Asp Ser Met Arg Lys Cys Val Ser Leu Asn Asn Leu Ser  
           35                  40                  45  
 Gln Tyr Gln His Pro Gln Asp Ala Asn Pro Pro Asn Ala Ser Gly Gly  
       50                  55                  60  
 Ser Gly Gly Asn Lys Glu Ala Ala Lys Gly Tyr Ala Ser Ala Asp  
 65                  70                  75                  80  
 Asp Ala Ala His Asn Pro Gly Gly Gly Arg Glu Arg Lys Arg Gly Val  
                   85                  90                  95  
 Pro Trp Thr Glu Glu Glu His Arg Leu Phe Leu Leu Gly Leu Gln Lys  
           100                  105                  110  
 Val Gly Lys Gly Asp Trp Arg Ala Ile Ser Arg Asn Phe Val Lys Thr  
       115                  120                  125  
 Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Phe Leu Arg  
       130                  135                  140  
 Arg Ser Asn Leu Asn Arg  
 145                  150

<210> 2135  
 <211> 125  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2135  
 Glu Asn Val Ala Ser Gly Ser Thr Glu Arg Pro Arg Ile Arg His Gln  
   1                  5                  10                  15  
 His Ser Gln Ser Met Asp Gly Ser Thr Ser Ile Lys Pro Glu Met Leu  
           20                  25                  30  
 Met Ser Gly Ser Glu Asp Ala Ser Ala Ala Asp Ala Lys Lys Ala Met  
       35                  40                  45  
 Ser Ala Ala Lys Leu Ala Glu Leu Ala Leu Ile Asp Pro Lys Arg Ala  
       50                  55                  60  
 Lys Arg Ile Trp Ala Asn Arg Gln Ser Ala Ala Arg Ser Lys Glu Arg  
 65                  70                  75                  80  
 Lys Met Arg Tyr Ile Ala Glu Leu Glu Arg Lys Val Gln Thr Leu Gln  
                   85                  90                  95  
 Thr Glu Ala Thr Thr Leu Ser Ala Gln Leu Thr Leu Leu Gln Arg Asp  
           100                  105                  110  
 Thr Asn Gly Leu Thr Ala Glu Asn Ser Glu Leu Lys Leu  
       115                  120                  125

<210> 2136  
 <211> 72  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2136  
 Met Ala Asp Ser Glu His Ser Ser Ser Asp Asp Thr Tyr Val Asp Ser  
   1                  5                  10                  15  
 Arg Glu Glu Thr Ser Glu Glu Ser Lys Leu Asp Phe Ser Glu Asp Glu  
           20                  25                  30  
 Glu Thr Leu Val Ile Arg Met Tyr Asn Leu Val Gly Glu Arg Trp Ser  
       35                  40                  45  
 Leu Ile Ala Gly Arg Ile Pro Gly Arg Thr Ala Glu Glu Ile Glu Lys  
       50                  55                  60  
 Tyr Trp Asn Ser Arg Tyr Ser Thr  
 65                  70

<210> 2137  
 <211> 135  
 <212> PRT  
 <213> Eucalyptus grandis

&lt;400&gt; 2137

```

Met Ala Gly Glu Glu Pro Tyr Ser Ala Asp Thr Asn Ser Asp Thr Phe
 1          5          10          15
Ala Asp Glu Glu Thr Leu Ile Pro Ser Ser Ser Glu Ala Leu Glu Ser
          20          25          30
Ala Trp Val Pro Thr Ser Ser Thr Ala His His Gly Ser Lys Ser Val
          35          40          45
Val Asn Phe Glu Asp Val Cys Gly Gly Gly Asp Thr Asn Thr Ala Pro
          50          55          60
Arg Pro Tyr Leu Arg Gln Ile Asp Leu Lys Glu Glu Ala Val Glu Glu
          65          70          75          80
Asp Tyr Gly Asp Gly Asn Phe Gln Pro Pro Gly Lys Lys Arg Arg Leu
          85          90          95
Ser Ala Asp Gln Val His Phe Leu Glu Arg His Phe Glu Val Glu Asn
          100          105          110
Lys Leu Glu Pro Glu Arg Lys Ile Gln Leu Ala Lys Asp Leu Gly Leu
          115          120          125
Gln Pro Arg Gln Val Ala Ile
          130          135

```

&lt;210&gt; 2138

&lt;211&gt; 123

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2138

```

Asp Thr Glu Asp Ser Lys Lys Lys Glu Arg His Ile Val Thr Trp Ser
 1          5          10          15
Gln Glu Glu Asp Asp Ile Leu Arg Glu Gln Ile Gly Ile His Gly Thr
          20          25          30
Glu Asn Trp Ser Ile Ile Ala Ser Lys Phe Lys Asp Lys Thr Thr Arg
          35          40          45
Gln Cys Arg Arg Arg Trp Tyr Thr Tyr Leu Asn Ser Asp Phe Lys Lys
          50          55          60
Gly Gly Trp Ser Pro Glu Glu Asp Val Leu Leu Cys Glu Ala Gln Lys
          65          70          75          80
Ile Phe Gly Asn Arg Trp Thr Glu Ile Ala Lys Val Val Ser Gly Arg
          85          90          95
Thr Asp Asn Ala Val Lys Asn Arg Phe Thr Thr Leu Cys Lys Lys Arg
          100          105          110
Ala Arg Tyr Glu Ala Leu Ala Lys Glu Asn Thr
          115          120

```

&lt;210&gt; 2139

&lt;211&gt; 126

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2139

```

Met Gly Arg Gln Pro Cys Cys Asp Lys Leu Gly Val Lys Lys Gly Pro
 1          5          10          15
Trp Thr Ala Glu Glu Asp Arg Lys Leu Val Asn Phe Ile Leu Thr His
          20          25          30
Gly Gln Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Arg Arg
          35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp
          50          55          60
Leu Lys Arg Gly Leu Leu Asn Glu Ala Glu Glu Ser Leu Val Ile Asp
          65          70          75          80
Leu His Ala Thr Leu Gly Asn Arg Trp Ser Lys Ile Ala Ala Arg Leu

```

				85					90				95				
Pro	Gly	Arg	Thr	Asp	Asn	Glu	Ile	Lys	Asn	His	Trp	Asn	Thr	His	Ile		
			100					105					110				
Lys	Lys	Lys	Leu	Ile	Arg	Met	Gly	Ile	Asp	Pro	Val	Thr	His				
		115					120					125					

<210> 2140  
 <211> 108  
 <212> PRT  
 <213> Eucalyptus grandis

Pro	Gly	Ser	Arg	Ser	Ser	Asn	Arg	Arg	Val	Glu	Arg	Lys	Lys	Gly	Asn		
1				5					10					15			
Pro	Trp	Thr	Glu	Glu	Glu	His	Arg	Arg	Phe	Leu	Ile	Gly	Leu	Gln	Lys		
			20					25					30				
Leu	Gly	Lys	Gly	Asp	Trp	Arg	Gly	Ile	Ala	Arg	Asp	Phe	Val	Thr	Thr		
		35					40					45					
Arg	Thr	Pro	Thr	Gln	Val	Ala	Ser	His	Ala	Gln	Lys	Tyr	Tyr	Ile	Arg		
		50				55					60						
Gln	Ser	Asn	Ala	Gly	Arg	Arg	Lys	Arg	Arg	Ser	Ser	Leu	Phe	Asp	Met		
65					70					75					80		
Ala	Pro	Asp	Met	Val	Cys	Leu	Leu	Tyr	Asp	Val	Ala	Ser	Ala	His	Ser		
				85					90					95			
Leu	His	Ser	Val	Gln	Ile	Ser	Gly	Ser	Cys	Met	Phe						
			100					105									

<210> 2141  
 <211> 109  
 <212> PRT  
 <213> Eucalyptus grandis

Met	Arg	Lys	Pro	Cys	Cys	Asp	Lys	Gln	Asp	Thr	Asn	Lys	Gly	Ala	Trp		
1				5					10					15			
Ser	Lys	Gln	Glu	Asp	Gln	Lys	Leu	Ile	Asp	Tyr	Ile	Arg	Lys	His	Gly		
			20					25					30				
Glu	Gly	Cys	Trp	Arg	Thr	Leu	Pro	Lys	Ala	Ala	Gly	Leu	Leu	Arg	Cys		
		35					40					45					
Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Ile	Asn	Tyr	Leu	Arg	Pro	Asp	Leu		
		50				55					60						
Lys	Arg	Gly	Asn	Phe	Ala	Glu	Asp	Glu	Glu	Asp	Leu	Ile	Ile	Lys	Leu		
65					70					75					80		
His	Ala	Leu	Leu	Gly	Asn	Arg	Trp	Ser	Leu	Ile	Ala	Gly	Arg	Leu	Pro		
				85					90					95			
Gly	Arg	Thr	Asp	Asn	Glu	Val	Lys	Asn	Tyr	Trp	Asn	Ser					
			100					105									

<210> 2142  
 <211> 65  
 <212> PRT  
 <213> Eucalyptus grandis

Ser	Pro	Glu	Glu	Asp	Glu	Lys	Leu	Phe	Asn	Tyr	Ile	Thr	Arg	Phe	Gly		
1					5				10					15			
Val	Gly	Cys	Trp	Ser	Ser	Val	Pro	Lys	Leu	Ala	Gly	Leu	Gln	Arg	Cys		
			20					25					30				
Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Ile	Asn	Tyr	Leu	Arg	Pro	Asp	Leu		
		35					40					45					
Lys	Arg	Gly	Met	Phe	Ser	Gln	Glu	Glu	Glu	Asp	Leu	Ile	Val	Ser	Leu		



[illegible]

```
<210> 2144
<211> 71
<212> PRT
<213> Pinus radiata
```

[illegible]

```
<210> 2145
<211> 110
<212> PRT
<213> Pinus radiata
```

	<400> 2145														
Ser 1	Leu	Val	Trp	Gly 5	Ala	Leu	Lys	Met	Gly 10	Lys	Thr	Lys	Met	Glu 15	Ile
Lys	Arg	Ile	Gln	Asn 20	Pro	Ser	Arg	Arg 25	Gln	Val	Thr	Phe	Ser 30	Lys	Arg
Lys	Asn	Gly 35	Leu	Leu	Lys	Lys	Ala 40	Phe	Glu	Leu	Ser	Val	Leu 45	Cys	Asp
Ala 50	Glu	Val	Ala	Leu	Ile	Ile 55	Phe	Ser	Glu	Thr	Gly 60	Lys	Ile	Cys	Glu
Phe 65	Ala	Ser	His	Asp	Asp 70	Met	Ala	Thr	Ile	Leu	Glu 75	Lys	Tyr	Arg	Ile 80
Tyr	Thr	Glu	Thr	His	Gly	Asn	Met	Glu	Ser	Ser	Ser	Val	Gln	Ser	Val

85 90 95  
 Lys Ile Gly Glu Ser Gln Leu Lys Ala Leu Arg Glu Lys Met  
 100 105 110

<210> 2146  
 <211> 50  
 <212> PRT  
 <213> Pinus radiata

<400> 2146  
 Leu Arg Gly Ala Asn Gly Cys Thr Ile Pro Ser Ile Gly Leu Thr Ser  
 1 5 10 15  
 Ile Glu Arg Val Glu Val Gln Thr Gln Leu Val Met Arg Pro Pro His  
 20 25 30  
 Ala Thr Glu Met Asp Asp Asn Phe Met Asp Val Asp Asn Val Pro Leu  
 35 40 45  
 Ser Gly  
 50

<210> 2147  
 <211> 168  
 <212> PRT  
 <213> Pinus radiata

<400> 2147  
 Glu Asp Gly Ser Leu Val Ile Cys Glu Arg Ser Leu Ser Ala Ala Gln  
 1 5 10 15  
 Gly Met Pro Met Val Ser Gln Ser Gln Ser Phe Val His Gly Glu Leu  
 20 25 30  
 Leu Ser Ser Gly Tyr Leu Ile Arg Pro Cys Glu Gly Arg Gly Ala Leu  
 35 40 45  
 Val Ile Met Val Asp His Arg Asn Leu Glu Ala Ser Ser Val Pro Glu  
 50 55 60  
 Ala Leu Arg Pro Leu Tyr Glu Ser Ser Thr Phe Ala Gln Lys Met  
 65 70 75 80  
 Thr Val Glu Ala Ser Tyr His Leu Gln Gly Lys Val Gln Pro Glu Met  
 85 90 95  
 Ile Ser Leu Ser Lys Lys Leu Gln Gln Pro Cys Asn Val Arg Ser Tyr  
 100 105 110  
 Ser Gln Arg Leu Cys Arg Gly Phe Asn Glu Ala Val Asn Thr Leu Pro  
 115 120 125  
 Asp Asp Gly Trp Met Ser Leu Ser Lys Asp Gly Leu Gly Asp Val Thr  
 130 135 140  
 Ile Cys Glu Ser Phe Val Lys Leu Pro Glu Pro Asn Ala Ser Gln Ile  
 145 150 155 160  
 Ala Tyr Val Asn Ser Met Gly Thr  
 165

<210> 2148  
 <211> 120  
 <212> PRT  
 <213> Pinus radiata

<400> 2148  
 Glu Asn Glu Ser Leu Arg Ala Arg Leu Arg His Met Asn Gly Asp Asp  
 1 5 10 15  
 Ile Asn Ser Leu Lys Leu Pro Glu Leu Phe His Leu Glu Gln Gln Leu  
 20 25 30  
 Glu Thr Ala Ala Thr Gln Val Arg Arg Arg Lys Asp Gln Val Leu Asp  
 35 40 45  
 Asn Glu Lys Ile Lys Arg Arg Asn Lys Met Arg Arg Lys Glu Asp Glu

	50					55					60					
Asn	Ile	Ile	Leu	His	Glu	Met	Leu	Asp	Gln	His	His	Gly	Gln	Met	Glu	
65					70					75					80	
Glu	Asp	Asn	Ala	Gln	Ile	Asn	Phe	Leu	Phe	Cys	Gln	Pro	Leu	Asn	Arg	
				85					90					95		
Ser	Asp	Thr	Thr	Phe	Pro	Ala	Ser	Leu	Leu	Arg	Leu	Gln	Pro	Asn	Gln	
			100					105					110			
Pro	Asn	Leu	Gln	Asp	Ile	Gly	Tyr									
		115					120									

```
<210> 2149
<211> 165
<212> PRT
<213> Pinus radiata
```

[illegible]

```
<210> 2150
<211> 68
<212> PRT
<213> Pinus radiata
```

[illegible]

```
<210> 2151
<211> 152
<212> PRT
<213> Pinus radiata
```

<400> 2151  
 Gln Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile  
 1 5 10 15  
 Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Thr Phe Ser Pro Gln Glu  
 20 25 30  
 Glu Asn Leu Ile Val Glu Leu His Ser Val Leu Gly Asn Arg Trp Ser  
 35 40 45  
 Gln Ile Ala Thr His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn  
 50 55 60  
 Leu Trp Asn Ser Cys Ile Lys Lys Lys Leu Arg Gln Arg Gly Ile Asp  
 65 70 75 80  
 Pro Asn Thr His Arg Pro Leu Ser Glu Val Asn Ala Glu Ala Gly Asp  
 85 90 95  
 Ser Lys Asn Asp Asn Ser Asn Lys Glu Val Glu Thr Gln Ala Ala Met  
 100 105 110  
 Asp Glu Ser His Val Ser Ala Gly Asn Glu Phe Lys His Leu Asn Ala  
 115 120 125  
 Ile Pro Arg Ala Asp Thr Ala Asn Pro Lys Phe Phe His Val Pro Val  
 130 135 140  
 Glu Asp Asn Thr Leu Ile Ala Ser  
 145 150

<210> 2152  
 <211> 89  
 <212> PRT  
 <213> Pinus radiata

<400> 2152  
 Met Arg Cys Thr Arg Trp Gln Gly Leu Pro Phe Ser Ser Lys Pro Lys  
 1 5 10 15  
 Val Lys Lys Gly Leu Trp Ser Pro Glu Glu Asp Glu Lys Leu Ile Asn  
 20 25 30  
 Tyr Met Met Lys Asn Gly Leu Leu Gly Cys Ser Trp Ser Tyr Val Ala  
 35 40 45  
 Lys Gln Ile Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp  
 50 55 60  
 Thr Asn Tyr Leu Arg Pro Gly Leu Lys Arg Gly Ala Ile Ser Pro Glu  
 65 70 75 80  
 Glu Glu Gln Leu Ile Ile His Leu Gln  
 85

<210> 2153  
 <211> 94  
 <212> PRT  
 <213> Pinus radiata

<400> 2153  
 Met Gly Arg Ala Pro Cys Cys Asp Lys Ala Asn Val Lys Lys Gly Pro  
 1 5 10 15  
 Trp Ser Pro Glu Glu Asp Thr Lys Leu Lys Ala Phe Ile Glu Gln His  
 20 25 30  
 Gly Thr Gly Gly Asn Trp Ile Ala Leu Pro Gln Lys Ala Gly Leu Lys  
 35 40 45  
 Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro  
 50 55 60  
 Asp Ile Arg His Gly Gly Phe Ser Glu Asp Glu Asp Asn Ile Ile Cys  
 65 70 75 80  
 Ser Leu Tyr Ala Ser Ile Gly Ser Met Val Ser Ile Ile Ala  
 85 90

<210> 2154

<211> 217  
 <212> PRT  
 <213> Pinus radiata

<400> 2154  
 Met Val Arg Gly Lys Thr Gln Met Lys Arg Ile Glu Asn Asp Thr Ser  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
 20 25 30  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Ile Ile Phe  
 35 40 45  
 Ser Pro Arg Gly Lys Leu Tyr Glu Phe Ala Ser Pro Ser Met Glu Glu  
 50 55 60  
 Ile Leu Glu Lys Tyr Lys Lys Arg Ser Lys Glu Asn Gly Met Ala Gln  
 65 70 75 80  
 Thr Thr Lys Glu Gln Asp Thr Gln Tyr Ser Lys His Ser Lys Gln Lys  
 85 90 95  
 Leu Ala Asn Met Glu Glu Gln Ile Arg Ile Leu Glu Ser Thr Gln Arg  
 100 105 110  
 Lys Met Leu Gly Glu Gly Leu Glu Ser Cys Ser Met Ala Glu Leu Asn  
 115 120 125  
 Lys Leu Glu Ser Gln Ala Glu Arg Gly Leu Ser His Ile Arg Ala Arg  
 130 135 140  
 Lys Thr Glu Ile Leu Val Asp Gln Ile Glu Cys Leu Lys Arg Lys Glu  
 145 150 155 160  
 Arg Leu Leu Ser Glu Glu Asn Ala Leu Leu Ser Arg Lys Trp Val Asp  
 165 170 175  
 Arg Gln Ser Val Asp Gly Ser Gly Ser Thr Ser Ser Ser Ile Gly Leu  
 180 185 190  
 Gly Ser Ile Glu Gln Ile Glu Val Glu Thr Gln Leu Val Ile Arg Pro  
 195 200 205  
 Pro Asn Ala Gln Asp His Cys Ser Val  
 210 215

<210> 2155  
 <211> 113  
 <212> PRT  
 <213> Pinus radiata

<400> 2155  
 Leu Gly Trp Gly Arg Gln Pro Ala Ala Leu Arg Thr Phe Ser Gln Arg  
 1 5 10 15  
 Leu Cys Lys Gly Phe Asn Glu Ala Val Asn Gly Phe Thr Asp Asp Gly  
 20 25 30  
 Trp Ser Leu Met Gly Asn Asp Gly Met Glu Asp Val Thr Ile Leu Val  
 35 40 45  
 Asn Ser Ser Pro Ser Lys Leu Phe Gly Gln Gln Phe Ala Ser Ser Asp  
 50 55 60  
 Gly Leu Pro Ala Leu Gly Gly Gly Ile Leu Cys Ala Lys Ala Ser Met  
 65 70 75 80  
 Leu Leu Gln Asn Val Pro Pro Ala Leu Leu Val Arg Phe Leu Arg Glu  
 85 90 95  
 His Arg Ser Glu Trp Ala Asp Ser Asn Ile Asp Ala Tyr Ser Ala Ala  
 100 105 110  
 Ser

<210> 2156  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

&lt;400&gt; 2156

```

Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1          5          10          15
Trp Thr Lys Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
 20          25          30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
 35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
 50          55          60
Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Ile Ile Lys
 65          70          75          80
Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
 85          90          95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr
 100          105

```

&lt;210&gt; 2157

&lt;211&gt; 124

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2157

```

Leu Trp Leu Arg Phe Ser Gly Met Asp Arg Ser Asn Ser Ala Thr Gly
 1          5          10          15
Glu Glu Asp Val Leu Ser Arg Cys Arg Glu Arg Lys Arg Phe Met Lys
 20          25          30
Leu Ala Ile Glu Asn Arg Tyr Lys Leu Ala Thr Ala His Val Ala Tyr
 35          40          45
Met Asp Ser Leu Arg Arg Met Gly Thr Gly Leu Arg Leu Phe Ala Glu
 50          55          60
Gly Glu Thr Met Ser Glu Ser Ser Tyr Ser Thr Ser Pro Ile Gly Thr
 65          70          75          80
Ser Glu Leu Ala Val Val Leu Pro Glu Lys Ser Val Ser Pro Ser Pro
 85          90          95
Phe Pro Ser Ser Ser Pro Ser Leu Ser Gln Pro Gln Ser Pro Arg Ser
 100          105          110
Glu Arg Ala Glu Ser Arg Ser Pro Leu Asp Ser Phe
 115          120

```

&lt;210&gt; 2158

&lt;211&gt; 110

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2158

```

Asp Gly Leu Val Gln Asn Ser Arg Glu Arg Lys Lys Gly Val Pro Trp
 1          5          10          15
Thr Glu Glu Glu His Lys Met Phe Leu Leu Gly Leu His Lys Leu Gly
 20          25          30
Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn Phe Val Thr Ser Arg Thr
 35          40          45
Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Phe Leu Arg Gln Ser
 50          55          60
Asn Leu Asn Lys Arg Lys Arg Arg Ser Ser Leu Phe Asp Ile Ser Thr
 65          70          75          80
Asp Ser Met Glu Asp Cys Tyr Gln Gly Ile Pro Glu Leu Ser Pro Val
 85          90          95
Met His Asp Leu Ser Leu Gly Gln Asn Ser Ser Leu Thr Ser
 100          105          110

```

<210> 2159  
 <211> 175  
 <212> PRT  
 <213> Pinus radiata

<400> 2159  
 Ser Ser Pro Val Ser Lys Pro Lys Leu Arg Lys Gly Leu Trp Ser Pro  
 1 5 10 15  
 Glu Glu Asp Asp Lys Leu Ile Asn Tyr Met Met Lys Asn Gly Gln Gly  
 20 25 30  
 Cys Trp Ser Asp Val Ala Lys Gln Ala Gly Leu Gln Arg Cys Gly Lys  
 35 40 45  
 Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu Lys Arg  
 50 55 60  
 Gly Ala Phe Ser Pro Gln Glu Glu Gln Leu Ile Ile His Leu His Ser  
 65 70 75 80  
 Ile Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala Arg Leu Pro Gly Arg  
 85 90 95  
 Thr Asp Asn Glu Ile Lys Asn Phe Trp Asn Ser Cys Ile Lys Lys Lys  
 100 105 110  
 Leu Lys His Leu Ser Ala Ser Thr Asn Asn Ser Lys Ser Ile Ser Ala  
 115 120 125  
 Pro Asn Arg Thr Ser Thr Met Asn Ser Ser Ile Thr Pro Phe Ser Glu  
 130 135 140  
 Ser Ser Ala Glu Pro Leu Glu Val Met Ala Thr Arg Tyr Gln Pro Ser  
 145 150 155 160  
 Asn Ala Phe Asn His Glu Val Pro Thr Ala Glu Asn Gln Val Leu  
 165 170 175

<210> 2160  
 <211> 78  
 <212> PRT  
 <213> Pinus radiata

<400> 2160  
 Met Gly Arg Ala Pro Cys Cys Glu Lys Val Gly Leu Lys Lys Gly Pro  
 1 5 10 15  
 Trp Thr Pro Glu Glu Asp Gln Lys Leu Leu Ala Tyr Ile Gln Glu His  
 20 25 30  
 Gly His Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp  
 50 55 60  
 Ile Lys Arg Gly Lys Phe Asn Pro Gln Glu Glu Gln Thr Ile  
 65 70 75

<210> 2161  
 <211> 159  
 <212> PRT  
 <213> Pinus radiata

<400> 2161  
 Arg Thr Pro Arg Cys Asp Gln Met Gly Leu Lys Lys Gly Pro Trp Thr  
 1 5 10 15  
 Pro Glu Glu Asp Gln Ile Leu Ile Ser Tyr Ile Asn Lys His Gly His  
 20 25 30  
 Gly Asn Trp Arg Ala Leu Pro Lys Gln Ala Gly Leu Met Arg Cys Gly  
 35 40 45  
 Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Ile Lys  
 50 55 60  
 Arg Gly Asn Phe Ser Leu Lys Glu Glu Gln Thr Ile Ile His Leu His

65					70					75				80
Gln	Ile	Leu	Gly	Asn	Arg	Trp	Ser	Ala	Ile	Ala	Ser	His	Leu	Pro Gly
				85					90					95
Arg	Thr	Asp	Asn	Glu	Ile	Lys	Asn	Val	Trp	Asn	Thr	His	Leu	Lys Lys
			100					105					110	
Arg	Leu	Leu	Gln	Ile	Gly	Val	Asp	Pro	Val	Thr	His	Ala	Pro	Arg Gly
		115					120					125		
Tyr	Asn	Val	Ser	Asn	Cys	Tyr	Thr	Ala	Val	Asn	Ile	Arg	Asp	His His
	130					135					140			
Gly	Glu	Gln	Ala	Asp	His	Gln	Leu	Gln	Ser	His	Val	Cys	Val	Ser
145					150					155				

<210> 2162  
 <211> 49  
 <212> PRT  
 <213> Pinus radiata

<400> 2162

Thr	Pro	Glu	Glu	Asp	Arg	Ile	Leu	Ile	Ser	Tyr	Ile	Lys	Arg	Asn	Gly
1				5					10					15	
His	Gly	Lys	Trp	Leu	Ala	Leu	Pro	Lys	Gln	Ala	Gly	Leu	Ser	Arg	Cys
			20					25					30		
Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Asn	Tyr	Leu	Arg	Pro	Asn	Ile	
		35					40					45			

Lys

<210> 2163  
 <211> 78  
 <212> PRT  
 <213> Pinus radiata

<400> 2163

Met	Gly	Thr	Gly	Glu	Ala	Thr	Pro	Thr	Lys	Pro	Ala	Ala	Lys	Pro	
1				5				10					15		
Ser	Ser	Ser	Ser	Gln	Glu	Thr	Pro	Thr	Thr	Pro	Val	Tyr	Pro	Asp	Trp
			20					25				30			
Ala	Ala	Ala	Phe	Gln	Ala	Tyr	Tyr	Gly	Pro	Gly	Ala	Thr	Pro	Pro	Pro
		35					40					45			
Pro	Ala	Phe	Phe	Ala	Ser	Thr	Val	Gly	Ser	Ala	Pro	Thr	Pro	His	Pro
	50					55					60				
Tyr	Met	Trp	Gly	Gly	Gln	Pro	Leu	Met	Pro	Pro	Tyr	Gly	Thr		
65					70					75					

<210> 2164  
 <211> 113  
 <212> PRT  
 <213> Pinus radiata

<400> 2164

Met	Gly	Arg	Gly	Lys	Ile	Glu	Ile	Lys	Lys	Ile	Asp	Asp	Val	Thr	Ser
1				5				10						15	
Arg	Gln	Val	Thr	Phe	Ser	Lys	Arg	Lys	Met	Gly	Ile	Phe	Lys	Lys	Ala
			20					25					30		
His	Glu	Leu	Ser	Val	Leu	Cys	Asp	Ala	Glu	Val	Ala	Val	Leu	Ile	Phe
		35					40					45			
Ser	Asn	Thr	Gly	Arg	Leu	Tyr	Asp	Tyr	Ala	Ser	Ser	Arg	Cys	Met	Glu
	50					55					60				
Arg	Thr	Ile	Glu	Arg	Tyr	Glu	Lys	Cys	Thr	Lys	Ala	Ile	Asn	Cys	Pro
65					70					75					80
Thr	Ser	Asp	Pro	Ile	Val	Glu	Asn	Lys	Ser	Pro	Ile	Gln	Glu	Gly	Ile



85 90 95  
 Glu Ile Leu Arg Gln Lys Leu Arg Ala Leu Gln Arg Leu Gln Arg Asn  
 100 105 110  
 Leu

<210> 2165  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

<400> 2165  
 Thr Lys Ala Ala Ile Lys Arg Leu Gln Ser Gln Ile Met Val Ala Phe  
 1 5 10 15  
 Gln Ala Val Asp Thr Thr Ser Ala Ala Ile Leu Lys Leu Arg Glu Asp  
 20 25 30  
 Glu Leu Tyr Pro Gln Leu Val Glu Leu Ser Lys Gly Leu Met Gln Met  
 35 40 45  
 Trp Arg Ala Met Tyr Glu Cys His Gln Val Gln Asn His Ile Val Gln  
 50 55 60  
 Gln Val Arg His Leu Gly Asn Leu Ala Ser Ala Glu Ala Thr Ser Ser  
 65 70 75 80  
 Tyr His Gln Gln Ala Thr Ile Gln Leu Glu Ala Gln Val Thr Ala Trp  
 85 90 95  
 Tyr Asp Ser Phe Cys Arg Met Ile Thr Ser Gln  
 100 105

<210> 2166  
 <211> 38  
 <212> PRT  
 <213> Pinus radiata

<400> 2166  
 Met Gly Ala Pro Lys Gln Lys Trp Thr Ser Glu Glu Glu Gly Ala Leu  
 1 5 10 15  
 Arg Ala Gly Val Glu Lys Tyr Gly Ala Gly Lys Trp Gln Thr Ile Leu  
 20 25 30  
 Lys Asp Pro Glu Phe Ala  
 35

<210> 2167  
 <211> 158  
 <212> PRT  
 <213> Pinus radiata

<400> 2167  
 Ser Gly His Met Asp Gly Gly Ser Gly Glu Asp Gln Asp Ala Ala Asp  
 1 5 10 15  
 Gln Asp His Asp His Asp His Asp His Asp His Glu Gln Gln Gln Thr  
 20 25 30  
 Arg Arg Lys Arg Tyr His Arg His Thr Ala Arg Gln Ile Gln Glu Met  
 35 40 45  
 Glu Ala Leu Phe Lys Glu Cys Pro His Pro Asp Asp Lys Gln Arg Gln  
 50 55 60  
 Arg Leu Ser Ile Glu Leu Gly Leu Lys Pro Arg Gln Val Lys Phe Trp  
 65 70 75 80  
 Phe Gln Asn Arg Arg Thr Gln Met Lys Ala Gln Gln Asp Arg Ser Asp  
 85 90 95  
 Asn Ala Ile Leu Arg Ala Glu Asn Glu Asn Leu Arg Asn Glu Asn Val  
 100 105 110  
 Ala Leu Arg Glu Ala Ile Lys Asn Gly Ala Cys Pro Asn Cys Gly Gly

115 120 125  
 Ser Thr Ser Leu Gly Glu Met Pro Gly Phe Asp Glu His His Phe Arg  
 130 135 140  
 Ile Glu Asn Thr Arg Leu Lys Glu Glu Leu Asp Arg Val Ser  
 145 150 155

<210> 2168  
 <211> 122  
 <212> PRT  
 <213> Pinus radiata

<400> 2168  
 Met Gly Cys Thr Gln Gly Gln Arg Gln Gly Glu Trp Glu Gly Lys Gly  
 1 5 10 15  
 Val Pro Ser Asn Ser Ser Arg Arg Ser Leu Arg Lys Gly Leu Trp Ser  
 20 25 30  
 Pro Asp Glu Asp Ile Glu Leu Thr Tyr Ile Met Arg Lys Gly Leu  
 35 40 45  
 Met Gly Cys Trp Asn Tyr Ile Ala Lys Gln Ala Gly Leu Gln Arg Cys  
 50 55 60  
 Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Gly Leu  
 65 70 75 80  
 Lys Arg Cys Ala Ile Ser Pro Gln Glu Glu Arg Leu Ile Ile Gln Leu  
 85 90 95  
 Gln Ser Ser Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala His Leu Pro  
 100 105 110  
 Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr  
 115 120

<210> 2169  
 <211> 101  
 <212> PRT  
 <213> Pinus radiata

<400> 2169  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Gln Gln Glu Asp Thr Arg Leu Val Ala His Ile Arg Ala His  
 20 25 30  
 Gly Gln Gly Gly Trp Ser Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Gln Arg Trp Ile Asn Tyr Leu His Pro Asp  
 50 55 60  
 Leu Lys Arg Ser Asn Phe Ser Glu Glu Glu Asp Glu Leu Ile Val Arg  
 65 70 75 80  
 Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu  
 85 90 95  
 Pro Gly Arg Thr Asp  
 100

<210> 2170  
 <211> 133  
 <212> PRT  
 <213> Pinus radiata

<400> 2170  
 Arg Leu Leu Pro Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn  
 1 5 10 15  
 Ser Thr Leu Arg Arg Arg Tyr His Gly Glu Lys Asp Gln Ser Asn Gly  
 20 25 30  
 Leu Ala Val Asn Leu Glu Ser Ala Ala Glu Asp Lys Glu Thr Met Thr

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          35          40          45
Pro Met Thr Pro Val Thr Ala Thr Ala Thr Ala Thr Ala Thr Ala Met
   50          55          60
Pro Val Ala Leu Val Phe Pro Thr Ala Ala Asp Asn Val Arg Lys Arg
65          70          75          80
Ser Asn Ser Ser Cys Ser Ala Asn Asp Asn Pro Gly Asp Ala Glu Val
          85          90          95
Glu Ser Cys Arg Leu Lys Arg Leu Asn Phe Ser Glu Ser Pro Ser Ser
          100          105          110
Ser Glu Asn Ile Asn Asn Asn Asn Asn Asn Glu Glu Ala Val Ser Gly
          115          120          125
His Cys Asn Ser Ala
   130

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<210> 2171
<211> 120
<212> PRT
<213> Pinus radiata

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<400> 2171
Met Arg Cys Lys Thr Gly Gln Ala Gln Gly Val Leu Glu Val Glu Gly
 1          5          10          15
Thr His Pro Ala Pro Ser Lys Pro Lys Leu Arg Lys Gly Leu Trp Ser
          20          25          30
Pro Val Glu Asp Asn Gln Leu Thr Asn Tyr Ile Leu Arg Arg Gly Leu
          35          40          45
Val Gly Cys Trp Asn Tyr Val Ala Lys Gln Ala Gly Leu Gln Arg Thr
          50          55          60
Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Gly Leu
65          70          75          80
Lys Arg His Pro Ile Ser Arg Gln Glu Glu Gln Leu Ile Ile Glu Leu
          85          90          95
Gln Ser Ile Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala Gln Leu Pro
          100          105          110
Gly Arg Thr Asp Ile Glu Ile Lys
          115          120

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<210> 2172
<211> 155
<212> PRT
<213> Pinus radiata

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<400> 2172
Gln Gln Leu Glu Ser Ser Arg Ile Lys Leu Lys Gln Ile Glu Gln Glu
 1          5          10          15
Leu Glu Arg Val Lys Gln Gln Gly Ile Ser Ile Asn Gly His Leu Gly
          20          25          30
Asp His Asn Gly Ser Gly Ala Ala Ala Phe Asp Met Glu Tyr Gly Arg
          35          40          45
Trp Val Glu Glu Gln Asn Arg Gln Ala Arg Glu Leu Arg Ala Ser Leu
          50          55          60
Gln Ala His Leu Thr Asp Ser Glu Leu Cys Val Leu Val Asp Asn Ala
65          70          75          80
Ile Ala His Tyr Asp Glu Leu Phe Arg Met Lys Gly Ala Ala Ser Lys
          85          90          95
Leu Asp Val Phe His Leu Met Ser Gly Met Trp Lys Thr Pro Thr Glu
          100          105          110
Arg Cys Phe Met Trp Met Gly Gly Phe Arg Pro Ser Glu Leu Leu Lys
          115          120          125
Ile Leu Thr Pro Gln Ile Glu Pro Leu Thr Glu Gln Gln Ser Phe Ala
          130          135          140

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Val Ser Ser Leu Lys Leu Ser Ser Gln Gln Ala  
145 150 155

<210> 2173  
<211> 63  
<212> PRT  
<213> Pinus radiata

<400> 2173  
Met Val Arg Gly Lys Ile Gln Met Lys Arg Ile Glu Asn Thr Ala Ser  
1 5 10 15  
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
20 25 30  
Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Met Ile Phe  
35 40 45  
Ser Pro Gly Gly Lys Leu Tyr Glu Phe Ala Asn Thr Ser Met Glu  
50 55 60

<210> 2174  
<211> 76  
<212> PRT  
<213> Pinus radiata

<400> 2174  
Arg Ala Arg Lys Thr Glu Ile Leu Val Thr Glu Ile Glu Gln Leu Gln  
1 5 10 15  
Arg Lys Glu Trp Ile Leu Ser Glu Glu Asn Ala Phe Leu Gly Lys Lys  
20 25 30  
Phe Val His Pro His Ser Val Ser Lys Thr Pro Gly Ser Glu Ser Gly  
35 40 45  
Ser Ile Gln Asn Ser Glu Val Glu Thr Gln Leu Val Met Arg Pro Pro  
50 55 60  
Cys Thr Asn Ala His Phe Leu Ile Asn Ser Ser His  
65 70 75

<210> 2175  
<211> 161  
<212> PRT  
<213> Eucalyptus grandis

<400> 2175  
Arg Glu Ser Ala Asn Cys Ala Ser Arg Val Ala Asp Arg Arg Glu Asn  
1 5 10 15  
Arg Arg Arg Arg Asp Met Gly Asn Gln Lys Leu Lys Trp Thr Lys Glu  
20 25 30  
Glu Glu Glu Ala Leu Leu Ala Gly Ile Ala Lys His Gly Ala Gly Lys  
35 40 45  
Trp Lys Asn Ile Leu Lys Asp Pro Glu Phe Ala Pro Ala Leu Val Asn  
50 55 60  
Arg Ser Asn Ile Asp Leu Lys Asp Lys Trp Arg Asn Leu Ser Val Gly  
65 70 75 80  
Thr Ser Gly Gln Gly Ser Arg Asp Lys Gln Arg Leu Ser Lys Val Lys  
85 90 95  
Ser Leu Met Ala Ala Pro Gln Ser Ser Thr Val Pro Leu Asn Pro Gln  
100 105 110  
Ala His Ala Ala Ser Thr Asp Val Ala Leu Val Asn Ser Ser Asn Ser  
115 120 125  
Phe Gln Asp Gly Lys Asn Tyr Ser Leu Trp Val Ser Val Leu Leu Phe  
130 135 140  
Leu Phe Ser Asn Gly Asn Leu Phe Tyr Phe Tyr Pro Leu Leu Ser Phe  
145 150 155 160

Leu

<210> 2176  
 <211> 31  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2176  
 Thr Arg Gln Ser Ala Arg Ala Leu Leu Ala Ile His Asp Tyr Phe Ser  
 1 5 10 15  
 Arg Leu Arg Ala Leu Ser Ser Leu Trp Leu Ala Arg Pro Arg Glu  
 20 25 30

<210> 2177  
 <211> 191  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2177  
 Met Ala Ser Arg Lys Glu Val Asp Arg Ile Lys Gly Pro Trp Ser Pro  
 1 5 10 15  
 Glu Glu Asp Glu Ala Leu Arg Leu Leu Val Gln Lys His Gly Pro Arg  
 20 25 30  
 Asn Trp Ser Leu Ile Ser Lys Ser Ile Pro Gly Arg Ser Gly Lys Ser  
 35 40 45  
 Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser Pro Gln Val Glu His Arg  
 50 55 60  
 Ala Phe Thr Pro Glu Glu Asp Asp Ile Ile Val Arg Ala His Ala Arg  
 65 70 75 80  
 Phe Gly Asn Lys Trp Ala Thr Ile Ala Arg Leu Leu Ser Gly Arg Thr  
 85 90 95  
 Asp Asn Ala Ile Lys Asn His Trp Asn Ser Thr Leu Lys Arg Lys Cys  
 100 105 110  
 Ser Pro Pro Leu Ser Pro Leu Ala Glu Glu Gly Asn Asn Arg Ala Phe  
 115 120 125  
 Asp Ala Ala Ala Gly Tyr Asp Gly Asp Leu Ser Pro Arg Glu Arg Pro  
 130 135 140  
 Ala Lys Arg Ser Ala Ser Ala Gly Pro Cys Leu Ser Pro Gly Ser Pro  
 145 150 155 160  
 Ser Gly Ser Gly Met Ser Asp Ser Ser Val His Phe Val Tyr Arg Pro  
 165 170 175  
 Val Ala Lys Thr Gly Pro Val Val Pro Pro Thr Val Glu Ala Thr  
 180 185 190

<210> 2178  
 <211> 113  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2178  
 Gln Val Ala Gln Leu Arg Val Glu Asn Ser Thr Leu Leu Lys Arg Leu  
 1 5 10 15  
 Ser Asp Ile Ser Gln Lys Tyr Asn Val Ala Ala Val Asp Asn Arg Val  
 20 25 30  
 Leu Lys Ala Asp Val Glu Thr Leu Arg Ala Lys Val Lys Met Ala Glu  
 35 40 45  
 Glu Thr Val Lys Arg Val Thr Gly Leu Asn Pro Met Leu His Val Met  
 50 55 60  
 Ser Asp Met Ser Ser Val Gly Val Pro Pro Phe Asp Gly Ser Pro Ser  
 65 70 75 80

[illegible]

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<210> 2179
<211> 314
<212> PRT
<213> Eucalyptus grandis
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	<400>			2179															
Met 1	Lys	Arg	Leu	Gly 5	Ser	Ser	Asp	Ser	Leu 10	Gly	Ala	Leu	Met 15	Ser	Ile				
Cys	Pro	Pro	Ser 20	Glu	Glu	Leu	Gln	His 25	Ser	Pro	Arg	Asn 30	Gly	Asn	Pro				
Ile	Tyr	His 35	Ser	Arg	Asp	Leu	Gln 40	Ser	Met	Leu	Glu	Leu 45	Gly	Leu	Asp				
Glu	Glu 50	Gly	Cys	Val	Glu	Asp 55	Gln	Ser	Ala	Gly	Gly 60	Gly	Gly	His	Val				
Gly 65	Gly	Glu	Lys	Lys 70	Arg	Arg	Leu	Ser	Ile	Asp 75	Gln	Val	Lys	Ala	Leu 80				
Glu	Lys	Asn	Phe 85	Glu	Val	Glu	Asn	Lys	Leu 90	Glu	Pro	Glu	Arg	Lys 95	Val				
Lys	Leu	Ala	Gln 100	Glu	Leu	Gly	Leu	Gln 105	Pro	Arg	Gln	Val	Ala 110	Val	Trp				
Phe	Gln	Asn 115	Arg	Arg	Ala	Arg	Trp	Lys 120	Thr	Lys	Gln	Leu 125	Glu	Arg	Asp				
Tyr	Gly 130	Val	Leu	Lys	Ser	Ser 135	Tyr	Glu	Ala	Leu	Lys 140	Leu	Ser	Tyr	Asp				
Ala 145	Leu	Lys	His	Asp	Asn 150	Glu	Ala	Leu	His	Lys 155	Glu	Ile	Lys	Glu	Leu 160				
Lys	Ser	Lys	Leu 165	Arg	Glu	Glu	Asp	Asp 170	Asn	Pro	Glu	Ser	Asn	Leu 175	Ser				
Val	Lys	Glu	Glu 180	Val	Ile	Ile	Pro	Gly 185	His	Asp	Val	Ser	Asp 190	Lys	Ile				
Arg	Ala	Ala 195	Asp	Asp	Gly	Asp	Asp 200	Asp	Thr	Lys	Arg	Ser 205	Pro	Pro	Pro				
Pro	Ile 210	Thr	Ala	Pro	Pro	Arg 215	Glu	Leu	Ser	Phe	Asn 220	Asn	Gly	Gly	Leu				
Lys 225	Asp	Gly	Ser	Ser 230	Asp	Ser	Asp	Ser	Ser	Ala 235	Ile	Val	Asn	Glu	Glu 240				
Asn	Ala	Ala	Thr 245	Ser	Ser	Ser	Ser	Pro	Asn 250	Pro	Ala	Val	Gln	Ser 255	His				
Gly	Gly	Phe 260	Leu	Lys	Phe	Met	Gly	Ser 265	Ser	Ser	Ser	Ser	Ala 270	Ser	Pro				
Pro	Pro	Ser 275	Pro	Pro	Ala	Ser	Phe 280	Gly	Gly	Cys	Phe	Ser 285	Phe	Gln	Phe				
Gln	Arg 290	Ala	Tyr	Gln	Pro	Gln 295	Pro	Gln	Pro	Pro	His 300	His	His	His	His				
His 305	Ser	Pro	Tyr	Val	Lys 310	Met	Glu	Glu	His										

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<210> 2180
<211> 94
<212> PRT
<213> Eucalyptus grandis
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<400> 2180  
Glu Arg Tyr Lys Ser Ala Cys Ser Asp Ser Ser His Pro Gln Ser Val

1	5	10	15
Ser Asp Val	Asn Thr Gln Phe Tyr	Gln Gln Glu Ala Ser Lys	Leu Arg
	20	25	30
Arg Gln Ile	Arg Glu Ile Gln Val Ser	Asp Arg His Leu Leu Gly	Glu
	35	40	45
Gly Ile Ser	Asp Leu Ser Phe Lys Asp	Leu Lys Asn Leu Glu Ser	Lys
	50	55	60
Leu Glu Lys	Ser Ile Ser Arg Val Arg	Ser Lys Lys Asn Glu Met	Leu
65	70	75	80
Phe Ala Glu	Ile Glu Tyr Met Gln Lys	Arg Gly Leu Val Gln	
	85	90	

<210> 2181  
 <211> 83  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2181			
Glu Asn Lys	Ile Asn Arg Gln Val Thr	Phe Ala Lys Arg Arg	Asn Gly
1	5	10	15
Leu Leu Lys	Lys Ala Tyr Glu Leu Ser	Val Leu Cys Asp Ala	Glu Val
	20	25	30
Ala Leu Ile	Ile Phe Ser Thr Arg Gly	Lys Leu Tyr Glu Phe	Cys Ser
	35	40	45
Ser Pro Ser	Met Leu Lys Thr Leu Asp	Arg Tyr Gln Lys Cys	Ser Tyr
	50	55	60
Gly Ser Val	Glu Val Asn Lys Pro Ser	Lys Glu Leu Glu Asn	Ala Tyr
65	70	75	80
Arg Glu Tyr			

<210> 2182  
 <211> 108  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2182			
Met Gly Arg	Gly Lys Ile Glu Ile Gln	Lys Ile Glu Asn Asp	Thr Asn
1	5	10	15
Arg Gln Val	Thr Tyr Ser Lys Arg Arg	Asn Gly Ile Phe Lys	Ala
	20	25	30
His Glu Leu	Thr Val Leu Cys Asp Ala	Arg Val Ser Ile Leu	Met Leu
	35	40	45
Ser Gly Asn	Lys Lys Leu His Glu Tyr	Ile Ser Pro Thr Thr	Thr Thr
	50	55	60
Lys Arg Met	Ile Asp Asp Tyr Gln Lys	Ala Leu Gly Ile Asp	Leu Trp
65	70	75	80
Thr Thr His	Tyr Asp Arg Met Gln Glu	Glu Leu Arg Lys Leu	Lys Glu
	85	90	95
Val Asn Asn	Asn Phe Arg Lys Glu	Ile Arg Gln Ile	
	100	105	

<210> 2183  
 <211> 40  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2183			
Arg Asn Leu	Met Gly Glu Asp Leu	Gly Thr Leu Asn Ser	Lys Glu Leu
1	5	10	15
Glu Gln Leu	Glu Arg Gln Leu Glu	Ala Ser Leu Lys His	Ile Arg Ser

20 25 30  
 Thr Lys Thr Gln Cys Met Leu Asp  
 35 40

<210> 2184  
 <211> 161  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2184  
 Met Val Phe Pro Thr Gln Ala Thr Pro Glu Glu Ser Pro Gln Arg Lys  
 1 5 10 15  
 Met Gly Arg Gly Lys Ile Glu Ile Lys Arg Ile Glu Asn Thr Thr Asn  
 20 25 30  
 Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
 35 40 45  
 Tyr Glu Leu Ser Val Leu Cys Glu Ala Glu Val Ala Leu Ile Val Phe  
 50 55 60  
 Ser Ser Arg Gly Arg Leu Tyr Glu Tyr Ala Asn Asp Ser Val Lys Ala  
 65 70 75 80  
 Thr Ile Glu Arg Tyr Lys Lys Ala Cys Ser Asp Ser Ser Ser Ser Gly  
 85 90 95  
 Ser Val Ser Glu Ala Asn Val Gln Phe Tyr Gln Gln Glu Ser Ala Lys  
 100 105 110  
 Leu Gln Gln Gln Ile Asn Asn Met Gln Asn Asn Asn Arg Gln Leu Val  
 115 120 125  
 Gly Asp Ser Ile Ala Gly Met Asn Met Lys Asp Met Lys Thr Thr Glu  
 130 135 140  
 Gln Lys Leu Glu Lys Ala Ile Ala Lys Ile Arg Ala Lys Lys Asn Ala  
 145 150 155 160  
 Ile

<210> 2185  
 <211> 92  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2185  
 Gln His Lys Glu Gln Met Leu Val Glu Ala Asn Arg Glu Leu Arg Lys  
 1 5 10 15  
 Lys Leu Glu Glu Ser Asn Thr Arg Ile Pro Leu Arg Leu Gly Trp Glu  
 20 25 30  
 Ala Glu Asp His Asn Asn Ile Ser Tyr Ser Arg Leu Pro Met Gln Ser  
 35 40 45  
 Gln Gly Leu Ile Phe Gln Pro Leu Gly Gly Asn Pro Thr Leu Gln Ile  
 50 55 60  
 Gly Tyr Asn Pro Ala Gly Ser Asn Glu Leu Asn Val Ser Ala Ala Asp  
 65 70 75 80  
 Gln His Pro Asn Gly Phe Ile Pro Gly Trp Met Leu  
 85 90

<210> 2186  
 <211> 113  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2186  
 Gly Ser Lys Glu Leu Glu Ser Leu Glu Arg Gln Leu Asp Gly Ser Leu  
 1 5 10 15  
 Lys Gln Ile Arg Ser Arg Arg Thr Gln Tyr Met Leu Asp Lys Leu Thr



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                20                25                30
Asp Leu Gln His Arg Glu Gln Leu Leu His Glu Ala Asn Arg Thr Leu
      35                40                45
Asn Gln Arg Leu Met Glu Gly Tyr Gln Val Asn Ala Leu Gln Leu Asn
      50                55                60
Gln His Ala Glu Glu Val Gly Gly Tyr Gly His Pro Pro Pro Pro
65      70                75                80
Leu Pro Pro Gln Pro Leu Ala Gln Pro His Ser Glu Ala Phe Phe Asn
      85                90                95
Pro Leu Glu Cys Glu Pro Thr Leu Gln Met Gly Tyr Gln Pro Asp Pro
      100                105                110
Val

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<210> 2187
<211> 309
<212> PRT
<213> Eucalyptus grandis

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<400> 2187
Met Thr Arg Arg Cys Ser His Cys Cys Asn Lys Gly His Asn Ser Arg
 1      5      10      15
Thr Cys Pro Val Arg Gly Gly Gly Gly Asp Gly Gly Gly Ala Ala Ala
      20      25      30
Ala Pro Ser Ser Ser Ser Pro Ser Thr Ser Ser Ser Gly Ala Ala Ala
      35      40      45
Ala Ala Ala Ala Ser Ala Ser Gly Gly Gly Val Lys Leu Phe Gly Val
      50      55      60
Arg Leu Thr Asp Gly Ser Ile Met Lys Lys Ser Ala Ser Val Gly Cys
65      70      75      80
Leu Ser Ala Ala His Tyr His Ser Ser Ser Ser Ala Ala Ala Ser Pro
      85      90      95
Asn Pro Gly Ser Ser Pro Ile Asp Gly Ser Asp Gly Tyr Leu Ser Asp
      100     105     110
Asp Pro Ala Pro Gly Ser Arg Ser Ser Asn Arg Arg Val Glu Arg Lys
      115     120     125
Lys Gly Asn Pro Trp Thr Glu Glu Glu His Arg Arg Phe Leu Ile Gly
      130     135     140
Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asp Phe
145     150     155     160
Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr
      165     170     175
Tyr Ile Arg Gln Ser Asn Ala Gly Arg Arg Lys Arg Arg Ser Ser Leu
      180     185     190
Phe Asp Met Ala Pro Asp Met Ala Thr Ala Asp Gln Pro Ser His Pro
      195     200     205
Glu Glu Thr Phe Leu Pro Pro Leu Val Arg Leu Asn Asp Asp Thr Asn
      210     215     220
Ser Thr Thr Ser Thr Ser Met Gly Leu Asp Leu Glu Arg Thr Pro Met
225     230     235     240
Glu Thr Ser His Pro Glu Thr Ser Glu Gly Gly Gly Asp Val Ala Met
      245     250     255
Glu Ser Ile Asp Gln Val Pro Leu Val Pro Cys Tyr Phe Pro Tyr Tyr
      260     265     270
Leu Pro Leu Pro Phe Pro Met Trp Pro Pro Asn Met Ala Pro Pro Glu
      275     280     285
Asp Gly Arg Val Val Glu Thr Ser His His Arg Val Leu Lys Pro Ile
      290     295     300
Pro Val Ile Pro Lys
305

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<210> 2188  
 <211> 123  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2188  
 Trp Asp Thr Ser Ser Ser Pro Pro Thr Leu Leu Glu Ser Val Asp Asn  
 1 5 10 15  
 Phe Ile Leu Ser Pro Ala Arg Thr Gly Lys Ala Glu Ser Glu Cys Leu  
 20 25 30  
 Ser Pro Arg Asn Ser Gly Leu Leu Asp Ala Leu Val His Glu Ser Lys  
 35 40 45  
 Thr Met Ser Ser Ala Lys Asn Asn Ser Pro Glu Lys Ser Thr Asn Ser  
 50 55 60  
 Ser Ala Leu Thr Pro Gly Asp Ile Ser Ser Ser Thr Leu Asp Ile Cys  
 65 70 75 80  
 Lys Ser Glu Trp Glu Glu Tyr Gly Asp Pro Ile Ser Pro Pro Gly His  
 85 90 95  
 Ser Ala Thr Ser Val Phe Asn Gly Cys Thr Pro Leu Ser Thr Ser Gly  
 100 105 110  
 Ser Ser Leu Asp Glu Gln Pro Tyr Pro Asp Thr  
 115 120

<210> 2189  
 <211> 136  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2189  
 His Ile Arg Arg Lys Leu Leu Asn Arg Gly Ile Asp Pro Ala Thr His  
 1 5 10 15  
 Arg Pro Leu Asn Glu Pro Ala Gln Asp Ala Thr Thr Ile Ser Phe Ala  
 20 25 30  
 Ala Ala Pro Ser Lys Gln Glu Pro Arg Asp Asp Ala Ile Ala Ala Ala  
 35 40 45  
 Leu Gly Tyr Lys Asn Glu Asn Asn Pro Thr Thr Thr Ala Ala Thr Val  
 50 55 60  
 Gln Glu Lys Cys Pro Asp Leu Asn Leu Glu Leu Arg Ile Ser Pro Pro  
 65 70 75 80  
 Cys Gln Gln Gln His Gln Pro Asp Ala Ser Met Gly Met Val Glu Gly  
 85 90 95  
 Asn His Cys Phe Ala Cys Ser Leu Gly Leu Gln Asn Ser Lys Glu Cys  
 100 105 110  
 Ser Cys Arg Arg Gly Ala Ser Gly Gly Ser Ser Ala His Gly Gly Tyr  
 115 120 125  
 Asp Phe Leu Gly Leu Lys Thr Ser  
 130 135

<210> 2190  
 <211> 109  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2190  
 Met Glu Phe Pro Ser Glu Phe Ser Glu Ala Ser Ser Gln Lys Arg Ile  
 1 5 10 15  
 Gly Gly Arg Gly Lys Ile Glu Ile Lys Arg Ile Glu Asn Thr Thr Asn  
 20 25 30  
 Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
 35 40 45  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe

	50					55				60						
Ser	Ser	Arg	Gly	Arg	Leu	Tyr	Glu	Tyr	Ala	Asn	Asn	Ser	Val	Arg	Gly	
65					70					75					80	
Thr	Ile	Glu	Arg	Tyr	Lys	Lys	Ala	Ser	Ser	Asp	Ser	Ser	Thr	Ser	His	
				85					90					95		
Ser	Pro	Phe	Pro	Glu	Val	Glu	His	Ser	Ser	Phe	Ile	Gln				
			100					105								

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<210> 2191
<211> 116
<212> PRT
<213> Eucalyptus grandis
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[illegible]

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<210> 2192
<211> 98
<212> PRT
<213> Eucalyptus grandis
```

[illegible]

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<210> 2193
<211> 198
<212> PRT
<213> Eucalyptus grandis
```

<400> 2193  
Met Gly Arg Gly Lys Val Glu Leu Lys Arg Ile Glu Asn Lys Ile Asn  
1 5 10 15  
Arg Gln Val Thr Phe Ala Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala

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      20      25      30
Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
      35      40      45
Ser Asn Arg Gly Lys Leu Tyr Glu Phe Cys Ser Ser Ser Ser Met Met
      50      55      60
Lys Thr Ile Glu Lys Tyr Gln Lys Cys Ser Tyr Gly Ser Leu Glu Thr
      65      70      75      80
Asn Cys Ser Ile Asn Glu Met Gln Asn Ser Tyr Gln Asp Tyr Leu Lys
      85      90      95
Leu Lys Thr Arg Val Glu Val Leu Gln Arg Ser Gln Arg Asn Leu Leu
      100      105      110
Gly Glu Glu Leu Gly Pro Leu Asn Ser Lys Glu Leu Glu Gln Leu Glu
      115      120      125
His Gln Leu Glu Asn Ser Leu Lys Gln Ile Arg Ser Ala Lys Thr Gln
      130      135      140
Phe Met Phe Asp Gln Leu Ala His Leu Gln His Lys Glu Gln Met Leu
      145      150      155      160
Val Glu Ala Asn Arg Glu Leu Arg Lys Lys Leu Glu Glu Ser Asn Thr
      165      170      175
Arg Ile Pro Leu Arg Leu Gly Trp Glu Ala Glu Asp His Asn Asn Ile
      180      185      190
Ser Tyr Ser Arg Leu Pro
      195

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<210> 2194
<211> 153
<212> PRT
<213> Eucalyptus grandis

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      <400> 2194
Met Arg Lys Pro Cys Cys Asp Lys Arg Asp Thr Asn Lys Gly Ala Trp
      1      5      10      15
Ser Lys Gln Glu Asp Gln Lys Leu Ile Asp Tyr Ile Gln Lys His Gly
      20      25      30
Glu Gly Ser Trp Arg Thr Leu Pro Gln Ala Ala Gly Leu Leu Arg Cys
      35      40      45
Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu
      50      55      60
Lys Arg Gly Asn Phe Ala Glu Asp Glu Glu Asp Leu Ile Ile Lys Leu
      65      70      75      80
His Ala Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu Pro
      85      90      95
Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Ser His Leu Arg
      100      105      110
Arg Lys Leu Leu Lys Met Gly Ile Asp Pro Asn Asn His Arg Leu Asn
      115      120      125
Gln Asn Leu Pro Arg Ser Gln Thr Arg Met Pro Arg Gln His Phe Leu
      130      135      140
Ile Gln Tyr Glu Asp His Met Thr Leu
      145      150

```

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<210> 2195
<211> 104
<212> PRT
<213> Eucalyptus grandis

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```

      <400> 2195
Glu Ala Leu Gln Gln Ser Leu Val Asp Thr Leu Ser Ser Thr Thr Leu
      1      5      10      15
Ser Pro Thr Gly Ser Gly Asn Val Ala Glu Tyr Met Gly Gln Met Ala
      20      25      30

```

```

Ile Ala Met Gly Lys Leu Ala Thr Leu Glu Asn Phe Val His Gln Ala
    35                      40                      45
Asp Leu Leu Arg Gln Gln Thr Leu Gln Gln Met His Arg Ile Leu Thr
    50                      55                      60
Thr Arg Gln Ala Ala Arg Ala Leu Leu Val Ile Asn Asp Tyr Ile Ser
    65                      70                      75                      80
Arg Leu Arg Ala Leu Ser Ser Leu Trp Leu Ala Arg Pro Arg Thr Glu
    85                      90                      95
Asn Ile Cys Ser Ala Lys Leu Phe
    100

```

```

<210> 2196
<211> 25
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 2196
Asp Pro Leu Met Lys Pro Trp Gln Ile Pro Cys Pro Ile Gln Pro Ile
    1           5           10           15
Ile Ala Ser Ala Asp Leu Phe Glu Cys
    20           25

```

```

<210> 2197
<211> 87
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 2197
Met Gly Arg Arg Lys Ile Glu Ile Gln Pro Ile Thr His Glu Arg Asn
    1           5           10           15
Arg Ser Val Thr Phe Leu Lys Arg Lys Asn Gly Leu Phe Lys Lys Ala
    20           25           30
Tyr Glu Leu Gly Val Leu Cys Ser Val Asp Val Ala Val Ile Ile Phe
    35           40           45
Glu Asp Arg Pro Gly His Ser Pro Lys Leu Tyr Gln Tyr Ser Ser Arg
    50           55           60
Gly Ile Gln Asp Ile Val Gln Arg His Leu His His Asp Gly Glu Thr
    65           70           75           80
Asp Asn Arg Gly Pro Gly Asp
    85

```

```

<210> 2198
<211> 107
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 2198
Arg Asp Arg Thr Phe Leu Val Gly Leu Glu Lys Leu Gly Lys Gly Asp
    1           5           10           15
Trp Arg Gly Ile Ser Arg Ser Tyr Val Thr Thr Arg Thr Pro Ala Gln
    20           25           30
Val Ala Ser His Ala Gln Lys Tyr Phe Leu Arg Gln Val Ser Phe Asn
    35           40           45
Lys Lys Lys Arg Arg Ser Ser Leu Phe Asp Met Val Lys Asn Gln Cys
    50           55           60
Ser Tyr Lys Leu Leu Pro Ser Tyr Arg Leu Ser Ser Ile Ser Leu Met
    65           70           75           80
Gly Phe Asp Lys Phe Leu Leu Tyr Lys Val Asp Val Lys Thr Ala Ala
    85           90           95
Gly Asp Arg Leu Gly Ser Leu Thr Ala Lys Pro
    100           105

```

<210> 2199  
 <211> 107  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2199  
 Met Thr Leu Glu Glu Phe Leu Val Arg Ala Gly Val Val Arg Glu Asp  
 1 5 10 15  
 Thr Gln Met Met Ala Arg Pro Gly Asp Asn Gly Val His Glu Glu Met  
 20 25 30  
 Ser Gln Phe Thr Ser Asn Gly Leu Ala Ser Ser Ala Ala Ala Gly Asn  
 35 40 45  
 Asp Phe Ile Phe Ser Ser Lys Pro Ala Gly Ser Ser Leu Asp Phe Ile  
 50 55 60  
 Gly Thr Arg Pro Thr Gln Leu Gln Gln Gln Pro Gln Pro Gln Pro Leu  
 65 70 75 80  
 Glu Pro Pro Ala Pro Leu Phe Pro Lys Pro Glu Thr Val Ser Phe Ala  
 85 90 95  
 Thr Ser Val His Leu Pro Asn Thr Ala Ser Tyr  
 100 105

<210> 2200  
 <211> 150  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2200  
 Ala Asn Ala Pro Leu Arg Ile Ala Met Asn Ser Asn Ala Ser Ser Asn  
 1 5 10 15  
 Pro Gln Ser Met Ala Thr Ser Thr Thr Ser Ala Thr Thr Pro Ala Ala  
 20 25 30  
 Gly Gly Asp Gly Gly Lys Lys Val Arg Lys Pro Tyr Thr Ile Thr Lys  
 35 40 45  
 Ser Arg Glu Ser Trp Thr Glu Glu His Asp Lys Phe Leu Glu Ala  
 50 55 60  
 Leu Gln Leu Phe Asp Arg Asp Trp Lys Lys Ile Glu Asp Phe Val Gly  
 65 70 75 80  
 Ser Lys Thr Val Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe Leu  
 85 90 95  
 Lys Val Gln Lys Asn Gly Ala Val Ala His Val Pro Pro Pro Arg Pro  
 100 105 110  
 Lys Arg Lys Ala Ala His Pro Tyr Pro Gln Lys Ala Ser Lys Asn Val  
 115 120 125  
 Leu Val Pro Leu Gln Ala Ser Met Ala Gln Pro Ser Ser Thr Asn Pro  
 130 135 140  
 Ala Phe Thr Ile Thr Pro  
 145 150

<210> 2201  
 <211> 171  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2201  
 Met Gly Arg Ser Pro Cys Cys Glu Ser Glu His Met Asn Lys Gly Ala  
 1 5 10 15  
 Trp Ser Lys Glu Glu Asp Glu Arg Leu Ile Ala Tyr Ile Lys Arg His  
 20 25 30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
 35 40 45

Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
 50 55 60  
 Leu Lys Arg Gly Asn Phe Ser Asp Glu Glu Asp Glu Leu Ile Ile Thr  
 65 70 75 80  
 Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Ala Arg Leu  
 85 90 95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile  
 100 105 110  
 Lys Arg Lys Leu His Ala Arg Gly Ile Asp Pro Gln Thr His Arg Pro  
 115 120 125  
 Leu Arg Leu His Gln His Cys Trp Cys Trp Cys Cys His Phe Thr  
 130 135 140  
 Leu Ser Val Leu Thr Leu Thr Thr Ala Ala Thr Arg Pro Arg Leu Thr  
 145 150 155 160  
 Arg Arg Leu Val Lys Asn Tyr His His His Gln  
 165 170

<210> 2202  
 <211> 98  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2202  
 Met Asn Ser Pro Leu Ala Gln Leu Val Asn Pro Arg Arg Met His Thr  
 1 5 10 15  
 Tyr Glu Pro Phe Asp Gln Phe Pro Met Trp Gly Asp Thr Phe Lys Ala  
 20 25 30  
 Asp Lys Val Lys Asn Leu Glu Ala Ser Ser Ser Val Ile Val His Ala  
 35 40 45  
 Val Asp Asp Gly Leu Asp Lys Lys Phe Glu Tyr Val Ser His Glu Ser  
 50 55 60  
 Ala Glu Asn Ser Ser Ser Arg Ser Asp Gln Glu Ala Asn Arg Pro Asp  
 65 70 75 80  
 Lys Val Gln Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser  
 85 90 95  
 Arg Leu

<210> 2203  
 <211> 111  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2203  
 Met Asn Ser Pro Leu Ala Gln Leu Val Asn Pro Arg Arg Met His Thr  
 1 5 10 15  
 Tyr Glu Pro Phe Asp Gln Phe Pro Met Trp Gly Asp Thr Phe Lys Ala  
 20 25 30  
 Asp Lys Val Lys Asn Leu Glu Ala Ser Ser Ser Val Ile Val His Ala  
 35 40 45  
 Val Asp Asp Gly Leu Asp Lys Lys Phe Glu Tyr Val Ser His Glu Ser  
 50 55 60  
 Ala Glu Asn Ser Ser Ser Arg Ser Asp Gln Glu Ala Asn Arg Pro Asp  
 65 70 75 80  
 Lys Val Gln Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser  
 85 90 95  
 Arg Leu Arg Lys Lys Lys Tyr Val Gln Gln Leu Glu Ser Ser Arg  
 100 105 110

<210> 2204  
 <211> 162

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2204

```

Met Ala Ser Ser Ser Val Ala Ser Ala Arg Lys Asp Ala Asp Arg
 1          5          10          15
Ile Lys Gly Pro Trp Ser Pro Glu Glu Asp Glu Ala Leu Gln Arg Leu
          20          25          30
Val Gln Ser Tyr Gly Pro Arg Asn Trp Ser Leu Ile Ser Lys Ser Ile
          35          40          45
Pro Gly Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu
          50          55          60
Ser Pro Gln Val Glu His Arg Pro Phe Thr Pro Glu Glu Asp Glu Ala
65          70          75          80
Ile Val Arg Ala His Ala Arg Phe Gly Asn Lys Trp Ala Thr Ile Ala
          85          90          95
Arg Leu Leu Asn Gly Arg Thr Asp Asn Ala Val Lys Asn His Trp Asn
          100          105          110
Ser Thr Leu Lys Arg Lys Cys Ser Ser Thr Cys Ser Ala Gly Gly Asp
          115          120          125
Asp Ala Asp Ala Leu Ala Glu Gln Gln Pro Leu Lys Arg Ser Ala Ser
          130          135          140
Leu Gly Thr Pro Thr Gly Gly Asn Asn Ala Val Ser Asp Leu Phe Phe
145          150          155          160
Ser Pro

```

&lt;210&gt; 2205

&lt;211&gt; 92

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2205

```

Met Ala Lys Glu Lys Ile Lys Ile Lys Lys Ile Asp Asn Leu Thr Ala
 1          5          10          15
Arg Gln Val Thr Phe Ser Lys Arg Arg Arg Gly Leu Ile Lys Lys Ala
          20          25          30
Glu Glu Leu Ser Val Leu Cys Asp Ala Asp Val Ser Leu Ile Val Phe
          35          40          45
Ser Ala Thr Gly Lys Leu Tyr Asp Phe Ser Ser Ser Arg Gln Met Lys
          50          55          60
Gly Glu Asp Leu Glu Gly Leu Asn Val Glu Glu Leu Asp Gln Leu Glu
65          70          75          80
Lys Lys Leu Glu Ala Gly Leu Ser Leu Val Ile Lys
          85          90

```

&lt;210&gt; 2206

&lt;211&gt; 148

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2206

```

Met Arg Lys Pro Asp Ala Ser Gly Lys Asn Ser Ser Asn Ser Asn Ala
 1          5          10          15
Asn Lys Leu Arg Lys Gly Leu Trp Ser Pro Glu Glu Asp Asp Lys Leu
          20          25          30
Met Asn Tyr Met Leu Asn Asn Gly Gln Gly Cys Trp Ser Asp Val Ala
          35          40          45
Arg Asn Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp
          50          55          60
Ile Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Ala Phe Ser Pro Gln

```



```

65          70          75          80
Glu Glu Glu Leu Ile Ile His Leu His Ser Ile Leu Gly Asn Arg Trp
      85          90          95
Ser Gln Ile Ala Ala Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys
      100          105          110
Asn Phe Trp Asn Ser Thr Ile Lys Arg Ser Arg Thr Arg His His
      115          120          125
Leu Leu Val Asp Thr Arg Gln Thr Arg Ala Ile Leu Leu Ala Ser Asp
      130          135          140
Val Lys Asp Val
145

```

```

<210> 2207
<211> 73
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 2207
Ala Pro Glu Ile Ala Pro Pro Leu Ala Ala Pro Arg Gly Gly His His
 1          5          10          15
Arg Arg Ala His Ser Glu Val Asn Phe Arg Ile Pro Glu Asp Leu Asp
      20          25          30
Leu Gly Pro Asp Pro Phe Glu Asn Gly Pro Ser Gly Ser Phe Glu Asp
      35          40          45
Phe Gly Ser Glu Asp Asp Leu Leu Ser Thr Tyr Met Asp Ile Glu Lys
      50          55          60
Phe Gly Ser Ser Ser Thr Arg Ala Gly
65          70

```

```

<210> 2208
<211> 147
<212> PRT
<213> Eucalyptus grandis

```

```

<400> 2208
Ser Glu Asn Val Ser Gly Gly Ala Ile Glu Arg Pro Arg Ala Thr Gly
 1          5          10          15
Lys Leu Ala Ala Pro Val Asn Ser Pro Ser Met Ser Ser Ser Leu Asp
      20          25          30
Leu Lys Asn Ser Cys Met Asp Ala Asn Ala Asn Pro Val Ser Ile Leu
      35          40          45
Gln Pro Gly Val Val Pro Pro Glu Ala Trp Leu Gln Val Met Ser Leu
      50          55          60
Cys Gly Arg Leu Leu Lys Ile Phe Pro Trp Lys Ala Ser Thr Ser Val
65          70          75          80
Leu Ser Ala Val Ser Ser Ser Cys Ser Leu Gln Tyr His Arg Leu Cys
      85          90          95
Phe Ser Lys Phe Ala Leu Cys Lys Asn Glu Arg Glu Leu Lys Arg Glu
      100          105          110
Arg Arg Lys Gln Ser Asn Arg Glu Ser Ala Arg Arg Ser Arg Leu Arg
      115          120          125
Lys Gln Ala Glu Thr Glu Glu Leu Gly Lys Lys Val Asp Ser Leu Ser
      130          135          140
Ala Glu Asn
145

```

```

<210> 2209
<211> 115
<212> PRT
<213> Eucalyptus grandis

```

&lt;400&gt; 2209

```

Phe Phe Leu Tyr Ile Ile Ser Leu Phe Leu Val Arg Glu Asn Ser Glu
 1           5           10           15
Arg Ser Arg Glu Gly Thr Ser Ser Asn Gly Asp Gly Lys Ser Glu Val
          20           25           30
Gln Gly Lys Val Ala Gly Glu Val Asp Ala Ala Ser Glu Asn Val Ser
          35           40           45
Gly Gly Ala Ile Glu Arg Pro Arg Ala Thr Gly Lys Leu Ala Ala Pro
          50           55           60
Val Asn Ser Pro Ser Met Ala Ser Ser Leu Asp Leu Lys Asn Ser Cys
          65           70           75           80
Met Asp Ala Asn Ala Asn Pro Val Ser Ile Leu Gln Pro Gly Val Val
          85           90           95
Pro Pro Glu Ala Trp Leu Gln Asn Glu Arg Glu Leu Lys Arg Glu Arg
          100          105          110
Arg Glu Gln
          115

```

&lt;210&gt; 2210

&lt;211&gt; 192

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2210

```

Met Gly Arg Gln Pro Cys Cys Asp Lys Ser Gly Val Lys Lys Gly Pro
 1           5           10           15
Trp Thr Ala Glu Glu Asp Lys Lys Leu Ile Asn Phe Ile Leu Thr Asn
          20           25           30
Gly His Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Arg Arg
          35           40           45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp
          50           55           60
Leu Lys Arg Gly Leu Leu Ser Glu Ala Glu Glu Gln Leu Val Ile Asp
          65           70           75           80
Leu His Ala Arg Leu Gly Asn Arg Trp Ser Lys Ile Ala Ala Arg Leu
          85           90           95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn His Trp Asn Thr His Ile
          100          105          110
Lys Lys Lys Leu Leu Lys Met Gly Ile Asp Pro Val Thr His Glu Pro
          115          120          125
Leu Asn Lys Pro Gln Lys Thr Pro Ser Glu His Asp Pro Glu Ala Ser
          130          135          140
Leu Ser Ser Ser Gln Ala Asp Pro Thr Ser Glu Ser Pro Ala Asn Thr
          145          150          155          160
His Gln Pro Asn Asn Ala His Ala Asp Glu Val Gln Leu Val Leu Val
          165          170          175
Leu Pro Val Gly Leu Val Arg Arg Glu Leu Leu Leu Arg Gln Gly Arg
          180          185          190

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&lt;210&gt; 2211

&lt;211&gt; 89

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2211

```

Leu Ser Arg Asn Met Asp Asp Val Phe Val Gln Arg Cys Asn Arg Asn
 1           5           10           15
Phe Thr Ala Arg Asp Arg Leu Ile Ser Lys Glu Arg Arg Asn Phe Gly
          20           25           30
Trp Val Cys Gly Val Thr Glu Glu Glu Glu Glu Leu Ile Ile Arg Met
          35           40           45

```

Tyr Lys Leu Val Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Leu Pro  
 50 55 60  
 Gly Arg Lys Ala Glu Glu Ile Glu Arg Tyr Trp Lys Met Arg Ser Ile  
 65 70 75 80  
 Asn Ala Ala Pro Leu Lys Pro Asn Thr  
 85

<210> 2212  
 <211> 237  
 <212> PRT  
 <213> Pinus radiata

<400> 2212  
 Met Val Lys Glu Leu Leu Met Met Cys Ser Asn Cys Gly His Ser Gly  
 1 5 10 15  
 His Ser Ser Arg Ala Cys Pro Asp Arg Gly Ser Val Lys Leu Phe Gly  
 20 25 30  
 Val Arg Leu Ile Ala Thr Asp Asp Gly Met Ala Cys Met Arg Lys Ser  
 35 40 45  
 Leu Ser Met Gly Asn Leu Gly His Tyr Arg Ser Leu Tyr Asn Val Asn  
 50 55 60  
 His Cys Ser Gly Thr Ser Glu Cys Gly Ser Ala Asp Gln Asp Gly Tyr  
 65 70 75 80  
 Leu Ser Asp Gly Phe Val His Ser Ser Ser Asn Ala Arg Glu Arg Lys  
 85 90 95  
 Lys Gly Val Pro Trp Ser Glu Glu Glu His Arg Met Phe Leu Tyr Gly  
 100 105 110  
 Leu Glu Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn Phe  
 115 120 125  
 Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr  
 130 135 140  
 Phe Leu Arg Gln Ser Asn Leu Asn Lys Arg Lys Arg Arg Ser Ser Leu  
 145 150 155 160  
 Phe Asp Met Cys Pro His Asp Ser His Val Thr Ser Ser Phe Arg Arg  
 165 170 175  
 Glu Asp Ser Leu Gly Asn Leu Tyr Glu Phe Ser Pro Lys His Ser Ala  
 180 185 190  
 Leu Gly Val Ser Pro Asn Phe Glu Leu Tyr Ser Phe Gly Val Ser Pro  
 195 200 205  
 Thr Leu Ser Leu Gly Arg Ser Leu Gln Pro Val Glu Ala Val Leu Glu  
 210 215 220  
 Glu Lys Ala Ala His Tyr His Pro Val Asn Ser Glu Glu  
 225 230 235

<210> 2213  
 <211> 55  
 <212> PRT  
 <213> Pinus radiata

<400> 2213  
 Trp Leu Gln Leu Cys Ser Gly Ile Asp Glu His Ala Ala Gly Phe Cys  
 1 5 10 15  
 Ser Gln Leu Val Phe Ala Pro Ile Asp Ala Ser Phe Ala Asp Asp Ala  
 20 25 30  
 Pro Leu Ala Pro Ser Gly Phe Arg Val Ile Pro Leu Glu Ser Gly Ser  
 35 40 45  
 Glu Cys Phe Ser Ser Lys Thr  
 50 55

<210> 2214  
 <211> 119

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2214

Gly Val Leu Lys Phe Pro Cys Phe Asp Leu Ile Thr Met Asn Leu Met  
 1 5 10 15  
 Glu Ser Phe Glu Ala Lys Gly Lys Gly Glu Lys Arg Arg Thr Val Arg  
 20 25 30  
 Gly Lys Thr Gln Leu Lys Arg Ile Glu Asn Gly Thr Ser Arg Gln Val  
 35 40 45  
 Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu  
 50 55 60  
 Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe Ser Pro Arg  
 65 70 75 80  
 Gly Lys Leu Tyr Glu Phe Ala Asn Pro Ser Met Gln Lys Met Leu Glu  
 85 90 95  
 Arg Tyr Glu Lys Cys Ser Glu Gly Ser Asn Pro Thr Ser Thr Ala Lys  
 100 105 110  
 Glu Gln Asp Val Gln Cys Leu  
 115

&lt;210&gt; 2215

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2215

Pro Lys Gln Asp Gln Lys Leu Val Thr Tyr Ile Gln Glu His Gly His  
 1 5 10 15  
 Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly Leu Leu Arg Cys Gly  
 20 25 30  
 Lys Ser Cys Arg Leu Arg Trp Ala Asn Tyr Leu Arg Pro Asp Ile Lys  
 35 40 45  
 Arg Gly Lys Phe Thr Val Gln Glu Glu Gln Thr Ile Ile Gln Leu His  
 50 55 60  
 Ala Leu Leu Gly Asn Arg Trp Ser Ala Ile Ala Thr His Leu Pro Lys  
 65 70 75 80  
 Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Leu Lys Lys  
 85 90 95  
 Arg Leu Leu Gln Met Gly Ile Asp Pro Val Thr His Lys Pro Lys Ser  
 100 105 110  
 Glu Ser Ile Met Val Pro Gly Val Gln Ser Ser Asn Gly Ser Ser Asn  
 115 120 125  
 Leu Ser His Met Ala Gln Trp Glu Ser Ala Arg Leu Glu Ala Glu Ser  
 130 135 140  
 Lys Ala  
 145

&lt;210&gt; 2216

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2216

Gly Ile Phe Ile Gly Gly Ser Cys Val Gly Gly Asp Gln Ser His Ser  
 1 5 10 15  
 Met Ser Gly Asn Gly Ala Leu Ala Phe Asp Met Glu Tyr Ala Arg Trp  
 20 25 30  
 Leu Asp Glu His His Arg Gln Ile Asn Glu Leu Arg Ser Ala Val Asn  
 35 40 45  
 Ser His Val Gly Asp Asn Glu Leu Arg Gly Leu Val Glu Gly Val Met

50						55					60				
Gly	His	Tyr	Asp	Glu	Ile	Phe	Arg	Leu	Lys	Thr	Val	Ala	Ser	Lys	Ala
65					70					75					80
Asp	Val	Phe	His	Leu	Val	Ser	Gly	Met	Trp	Lys	Thr	Pro	Ala	Glu	Arg
			85						90					95	
Cys	Phe	Met	Trp	Met	Gly	Gly	Phe	Arg	Pro						
			100					105							

<210> 2217  
 <211> 114  
 <212> PRT  
 <213> Pinus radiata

<400> 2217

Asn	Arg	Arg	Ala	Arg	Thr	Lys	Trp	Lys	Arg	Asn	Glu	Val	Glu	Cys	Asp
1				5					10					15	
Asn	Leu	Lys	Arg	Cys	Cys	Glu	Ser	Leu	Arg	Glu	Glu	Asn	Arg	Arg	Leu
			20					25					30		
Glu	Lys	Glu	Val	Gln	Ser	Leu	Arg	Ala	Met	Lys	Val	Pro	Gln	Ser	Pro
		35					40					45			
Asn	Ser	Met	Pro	Leu	Ala	Ala	Thr	Leu	Ala	Met	Cys	Pro	Ala	Cys	
	50					55				60					
Glu	Gly	Leu	Ala	Ile	Lys	Asn	Arg	Gly	Ala	Ala	Thr	Ser	Ser	Thr	Ala
65				70					75						80
Lys	Ser	Gln	Gln	Ser	Leu	Leu	Thr	Ile	Met	Gly	Ile	Gly	Asp	Val	Asn
			85					90					95		
Met	Ile	Ser	Lys	Asn	Asn	Gln	Thr	Pro	Ser	Met	Gly	Met	Gly	Asp	Glu
			100					105					110		
Met	Asn														

<210> 2218  
 <211> 126  
 <212> PRT  
 <213> Pinus radiata

<400> 2218

Trp	Asn	Leu	Ile	Glu	Glu	Lys	Ile	Glu	Gly	Arg	Ser	Gly	Lys	Ser	Cys
1				5					10					15	
Arg	Leu	Arg	Trp	Phe	Asn	Gln	Leu	Asp	Pro	Arg	Ile	Asn	Arg	Arg	Pro
			20					25					30		
Phe	Thr	Glu	Glu	Asp	Glu	Glu	Lys	Leu	Leu	Ala	Ala	His	Arg	Leu	Tyr
		35					40					45			
Gly	Asn	Lys	Trp	Ala	Met	Ile	Ala	Arg	Leu	Phe	Pro	Gly	Arg	Thr	Asp
	50					55				60					
Asn	Ala	Val	Lys	Asn	His	Trp	His	Val	Ile	Met	Ala	Arg	Arg	Tyr	Arg
65				70					75						80
Glu	Gln	Ser	Ser	Ala	Phe	Gly	Arg	Arg	Lys	Leu	Pro	Gln	Val	His	Arg
			85					90					95		
Arg	Glu	Lys	Arg	Ala	Cys	Thr	Asp	Asp	Glu	Thr	Arg	Met	Gly	Ser	Ser
			100					105					110		
Ser	Cys	Asn	Met	Trp	Val	Asp	Lys	Tyr	Ser	Ser	Leu	Lys	Ser		
		115					120					125			

<210> 2219  
 <211> 123  
 <212> PRT  
 <213> Pinus radiata

<400> 2219

Leu	Ile	Ala	Tyr	Ile	Arg	Ala	Asn	Gly	Glu	Gly	Ser	Trp	Arg	Ser	Leu
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

```

1           5           10           15
Pro Lys Ala Ala Gly Leu Pro Arg Cys Gly Lys Ser Cys Arg Leu Arg
                20           25           30
Trp Ile Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Ser Phe Thr Glu
                35           40           45
Glu Glu Asp Glu Leu Ile Ile Lys Leu His Ser Val Val Gly Asn Lys
                50           55           60
Trp Ser Leu Ile Ala Gly Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile
        65           70           75           80
Lys Asn Tyr Trp Asn Thr His Ile Lys Arg Lys Leu Leu Ile Lys Gly
                85           90           95
Ile Asp Pro Gln Ser His Arg Pro Leu Gly Gln Pro Tyr Ser Ser Asn
                100           105           110
Asn Met Pro Val Ser Arg Leu Phe Leu Thr Ser
                115           120

```

<210> 2220  
 <211> 176  
 <212> PRT  
 <213> Pinus radiata

```

<400> 2220
Leu Ser Asn Ile Glu Pro Lys Gln Ile Lys Val Trp Phe Gln Asn Arg
1           5           10           15
Arg Cys Arg Glu Lys Gln Arg Lys Glu Ala Ser Arg Leu Gln Thr Val
                20           25           30
Asn Arg Lys Leu Thr Ala Met Asn Lys Leu Leu Met Glu Glu Asn Asp
                35           40           45
Arg Leu Gln Lys Gln Val Ser Gln Leu Val Tyr Glu Asn Gly Tyr Met
                50           55           60
Arg Gln Gln Leu Gln Asn Ala Ser Val Ala Ala Thr Asp Thr Ser Cys
        65           70           75           80
Glu Ser Val Val Thr Ser Gly Gln His Gln His Asn Pro Thr Pro Gln
                85           90           95
His Pro Pro Arg Asp Ala Ser Pro Ala Gly Leu Leu Ser Ile Ala Glu
                100           105           110
Glu Thr Leu Thr Glu Phe Leu Ser Lys Ala Lys Gly Ala Ala Val Asp
                115           120           125
Trp Val Gln Met Pro Gly Met Lys Pro Gly Pro Asp Ser Ile Gly Ile
                130           135           140
Val Ala Ile Ser Asn Thr Cys Asn Gly Val Ala Ala Arg Ala Cys Gly
        145           150           155           160
Leu Val Gly Leu Asp Pro Thr Lys Val Ala Glu Ile Leu Lys Asp Arg
                165           170           175

```

<210> 2221  
 <211> 119  
 <212> PRT  
 <213> Pinus radiata

```

<400> 2221
Leu Tyr Gln Cys Gln Ala Leu Phe Glu Asn Gly Ala Val Glu Lys Leu
1           5           10           15
Ser Arg Thr Tyr Asn Asp Leu Tyr Asp Asp Leu Lys Glu Glu Ile Leu
                20           25           30
Ser Trp Leu Pro Val Glu Cys Val Cys Arg Phe Arg Ser Val Ser Lys
                35           40           45
Gln Trp Asn Asn Leu Leu Ser Ser His Asn Phe Ile Lys Lys Val Trp
                50           55           60
Arg Lys Lys Pro Ala Asn Met Asn Pro Trp Leu Val Leu His Pro Val
        65           70           75           80

```

[illegible]

```
<210> 2222
<211> 124
<212> PRT
<213> Pinus radiata
```

<400> 2222															
Asp 1	Lys	Lys	Leu	Ile 5	Asn	Phe	Leu	Thr	Thr 10	His	Gly	Gln	Cys	Cys 15	Trp
Arg	Thr	Val	Pro 20	Glu	Leu	Ala	Gly	Ile 25	Ser	Arg	Cys	Gly	Lys 30	Ser	Cys
Arg	Leu	Arg 35	Trp	Thr	Asn	Tyr	Leu 40	Arg	Pro	Asp	Leu	Lys 45	Arg	Gly	Val
Phe 50	Ser	Glu	Ser	Glu	Glu	Lys 55	Leu	Ile	Leu	Asp	Leu	His 60	Ser	Arg	Val
Gly 65	Asn	Arg	Trp	Ser	Lys 70	Ile	Ala	Ser	Phe	Leu 75	Pro	Gly	Arg	Thr	Asp 80
Asn	Glu	Leu	Lys 85	Asn	Tyr	Trp	Asn	Thr	His 90	Ile	Lys	Lys	Lys	Leu 95	Lys
Arg	Met	Gly	Leu 100	Asp	Pro	Gly	Asp	Ala 105	Gln	Ala	Ile	Ser	Glu 110	Thr	Leu
Pro	Gln	Pro 115	Ala	Pro	Val	Ala	Glu 120	Asn	Asn	Asp	Val				

```
<210> 2223
<211> 175
<212> PRT
<213> Pinus radiata
```

	<400> 2223															
Met 1	Lys	Gly	Lys	Ser 5	Pro	Gly	His	Asp	Glu 10	Pro	Asp	Arg	Ile	Lys 15	Gly	
Pro	Trp	Ser	20	Glu	Glu	Asp	Ala	Ala 25	Leu	Gln	His	Phe	Val 30	Gln	Lys	
Tyr	Gly	Pro 35	Arg	Asn	Trp	Ser	Leu 40	Ile	Ser	Lys	Ala	Ile 45	Pro	Gly	Arg	
Ser	Gly	Lys	Ser	Cys	Arg	Leu 55	Arg	Trp	Cys	Asn	Gln 60	Leu	Ser	Pro	Gln	
Val 65	Glu	His	Arg	Pro	Phe	Thr 70	Pro	Glu	Glu	Asp 75	Ala	Thr	Ile	Val 80	Arg	
Ala	His	Ala	Gln	His 85	Gly	Asn	Lys	Trp	Ala 90	Thr	Ile	Ala	Arg	Met 95	Leu	
Ser	Gly	Arg	Thr 100	Asp	Asn	Ala	Ile	Lys 105	Asn	His	Trp	Asn	Ser 110	Thr	Leu	
Arg	Arg	Arg 115	Cys	Gln	Gly	Gly	Gly 120	Ala	Leu	Val	Ile	Asp 125	Asp	Glu	Ile	
Ser	Ser 130	Gly	Ala	Asp	Gly	Phe 135	Arg	Lys	Arg	Asn	Leu 140	Ser	Glu	Asp	Ala	
Asp 145	Ala	Ser	Arg	Lys	Phe 150	Lys	Lys	Leu	Ser	Leu 155	Gly	Thr	Thr	Thr 160	Thr	
Thr	Thr	Thr	Thr	Glu 165	Pro	Ser	Thr	Ser	Ser 170	Ala	Ser	Asp	Arg	Ser 175		

<210> 2224  
<211> 103

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2224

```

Met Ser Ser Arg Ser Cys Ser Leu Cys Gly Leu Asn Gly His Asn Ser
 1          5          10          15
Arg Thr Cys Val Gly Ser Gly Val Met Leu Phe Gly Val Arg Leu Thr
 20          25          30
Asp Gly Pro Met Arg Lys Ser Ala Ser Met Asn Asn Leu Ser Asn Leu
 35          40          45
Ser Gln Tyr Glu His Ser Asp Pro Ala Glu Val Ala Ala Glu Gly Phe
 50          55          60
Asp Gly Tyr Val Ser Asp Asp Leu Val His Ser Ser Ser Asn Ala Arg
 65          70          75          80
Glu Arg Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe
          85          90          95
Leu Val Gly Leu Gln Arg Val
          100

```

&lt;210&gt; 2225

&lt;211&gt; 96

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2225

```

Met Ser Ser Arg Ser Cys Ser Leu Cys Gly Leu Asn Gly His Asn Ser
 1          5          10          15
Arg Thr Cys Val Gly Ser Gly Val Met Leu Phe Gly Val Arg Leu Thr
 20          25          30
Asp Gly Pro Met Arg Lys Ser Ala Ser Met Asn Asn Leu Ser Asn Leu
 35          40          45
Ser Gln Tyr Glu His Ser Asp Pro Ala Glu Val Ala Ala Glu Gly Phe
 50          55          60
Asp Gly Tyr Val Ser Asp Asp Leu Val His Ser Ser Ser Asn Ala Arg
 65          70          75          80
Glu Arg Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe
          85          90          95

```

&lt;210&gt; 2226

&lt;211&gt; 131

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2226

```

Arg Gly Arg Val Gln Leu Arg Arg Ile Glu Asn Lys Ile Ser Arg Gln
 1          5          10          15
Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Met Lys Lys Ala Ala Glu
 20          25          30
Leu Ser Ile Leu Cys Asp Ala Glu Val Ala Leu Ile Val Phe Ser Asn
 35          40          45
Lys Asp Lys Leu Tyr Glu Phe Ala Ser Ser Ser Met Thr Lys Ile Leu
 50          55          60
Glu Arg Tyr Arg Lys Arg Ser Asn Leu Ile Gln Asp Ile Gly Lys Asp
 65          70          75          80
Pro Gln Asn Ser Asp Ile Glu Leu Thr Arg Leu Lys Glu Glu Val Asp
          85          90          95
Arg Leu Gln Arg Ser Arg Arg His Leu Leu Gly Glu Asp Leu His Gln
          100          105          110
Leu Gly Ala Thr Asp Leu Gln His Leu Glu Gln Gln Leu Glu Glu Ala
          115          120          125
Leu Gln Lys

```



130

<210> 2227  
 <211> 49  
 <212> PRT  
 <213> Pinus radiata

<400> 2227  
 Met Pro Ser Ile Met Glu Lys Gln Asn Ser Gly Glu Asp Ser Asp Ser  
 1 5 10 15  
 Lys Gly Gln Leu Asp Asn Gly Lys Tyr Val Arg Tyr Thr Asn Glu Gln  
 20 25 30  
 Val Glu Thr Leu Glu Arg Ala Tyr Asn Glu Cys Ser Lys Pro Ser Thr  
 35 40 45  
 Arg

<210> 2228  
 <211> 128  
 <212> PRT  
 <213> Pinus radiata

<400> 2228  
 Lys Ile Glu Asn Thr Thr Ser Arg Gln Val Thr Phe Cys Lys Arg Lys  
 1 5 10 15  
 Asn Gly Leu Leu Lys Lys Ala Tyr Glu Leu Ser Leu Leu Cys Asp Ala  
 20 25 30  
 Glu Val Ala Leu Leu Ile Phe Ser Thr Ser Gly Arg Leu Tyr Glu Phe  
 35 40 45  
 Ala Asn Lys Ser Val Ser Ala Thr Thr Glu Arg Tyr Met Arg Thr Tyr  
 50 55 60  
 Ala Glu Asn Met Pro Gln Ser Arg Ala Leu Tyr Pro Asp Cys His His  
 65 70 75 80  
 Trp Gln Glu Glu Val Arg Lys Leu Thr Gln Gln Arg Asp Ser Leu Thr  
 85 90 95  
 Asn Ser Ile Arg Gln Ile Met Gly Glu Gly Leu Glu Ser Leu Ser Met  
 100 105 110  
 Lys Glu Leu Lys His Ile Gln Val Gln Leu Glu Lys Ser Ile Ser Cys  
 115 120 125

<210> 2229  
 <211> 181  
 <212> PRT  
 <213> Pinus radiata

<400> 2229  
 Glu Asp Leu Asp Asp Cys Ile His Pro Pro Glu Lys Lys Arg Arg Leu  
 1 5 10 15  
 Thr Ala Asp Gln Val Gln Phe Leu Glu Arg Ser Phe Glu Ile Glu Asn  
 20 25 30  
 Lys Leu Glu Pro Glu Arg Lys Ile Gln Leu Ala Lys Glu Leu Gly Leu  
 35 40 45  
 Gln Pro Arg Gln Val Ala Val Trp Phe Gln Asn Arg Arg Ala Arg Trp  
 50 55 60  
 Lys Thr Lys Gln Leu Glu Arg Asp Tyr Asp Ile Leu Lys Ser Arg Tyr  
 65 70 75 80  
 Glu Asn Leu Arg Val Asp Tyr Asp Ser Leu Lys Glu Lys Asp Lys  
 85 90 95  
 Leu Arg Ala Glu Val Thr Phe Leu Thr Asp Lys Leu His Asp Ser Asp  
 100 105 110  
 His Glu Ala Leu Thr Lys Asp Ser Glu Ser Ala Asp Lys Lys Val Tyr

115	120	125
Pro Gln Pro Ala Ser His Ser Asp Cys Val Gly Glu Pro Glu Arg Ser		
130	135	140
Thr Ala Ala Lys Asp Thr Pro Pro Gly Cys Lys His Glu Asp Leu Leu		
145	150	155
Ser Ser Gly Thr Asp Ser Ser Gly Val Leu Asp Glu Asp Ser Pro His		
	165	170
His Val Asp Cys Gly		175
180		

<210> 2230  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

<400> 2230

Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala	
1	5
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His	10
	20
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg	25
	30
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp	35
	40
Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Val Ile Lys	45
65	50
Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu	55
	60
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr	65
	70
	75
	80
	85
	90
	95
	100
	105

<210> 2231  
 <211> 125  
 <212> PRT  
 <213> Pinus radiata

<400> 2231

Lys Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Gln Phe Leu Met	
1	5
Gly Leu Arg Lys Tyr Gly Lys Gly Asp Trp Arg Ser Ile Ser Arg Asn	10
	20
Phe Val Val Ser Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys	25
	30
Tyr Tyr Ile Arg Leu Gly Ser Asp Asn Lys Asn Lys Arg Arg Ser Ser	35
	40
Ile His Asp Ile Thr Thr Val His Gly Thr Asp Arg Met Pro Ser Pro	45
65	50
Leu Leu His Val Ser Asn Arg Gln Thr Asn Ser Pro Ser Thr Gln Ala	55
	60
Glu Met Asn His Ser Pro Cys Leu Asp Ile Ser Ile Ser Asp Phe Thr	65
	70
	75
	80
	85
	90
	95
	100
	105
	110
Arg Thr Ser Asn Lys Leu Phe Gly Thr Ser Asn Arg Trp	115
	120
	125

<210> 2232  
 <211> 150  
 <212> PRT  
 <213> Pinus radiata

<400> 2232

Met Thr Arg Lys Cys Ser His Cys Gly Asn Asn Gly His Asn Ser Arg
---

```

      1           5           10           15
Thr Cys Pro Asn Arg Gly Gly Val Lys Leu Phe Gly Val Arg Leu Thr
      20           25           30
Asp Gly Pro Ile Arg Lys Ser Ala Ser Met Gly Asn Leu Met Met Met
      35           40           45
Ser Asn Pro Ser Ser Pro Ala Asp Pro Ser Glu Pro Ala Ser Ala Ala
      50           55           60
Ala Ala Ala Ala Ala Ala Ala Ala Ser Gly Tyr Leu Ser Asp Gly Leu
      65           70           75           80
Val Glu Ala Ser Thr Ser Ser Asn Ser Arg Glu Arg Lys Lys Gly Val
      85           90           95
Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Leu Gly Leu Gln Lys
      100          105          110
Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asn Phe Val Ile Thr
      115          120          125
Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr Phe Ile Arg
      130          135          140
Gln Ser Asn Met Thr Arg
      145          150

```

<210> 2233  
 <211> 102  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 2233
Met Lys Met Ser Leu Pro Ser Asn Val Leu Thr Leu Ser Ala Asp Ser
      1           5           10           15
Asn Ser Asn Ser Asn Ser Ile Ser Ser Gly Asp Glu Leu Ala Ala
      20           25           30
Lys Val Arg Lys Pro Tyr Thr Ile Thr Lys Gln Arg Glu Arg Trp Ser
      35           40           45
Glu Asp Glu His Leu Lys Phe Leu Glu Ala Leu Lys Met Tyr Gly Arg
      50           55           60
Ala Trp Arg Arg Ile Glu Glu His Ile Gly Thr Lys Thr Ala Val Gln
      65           70           75           80
Ile Arg Ser His Ala Gln Lys Phe Phe Ser Lys Leu Val Arg Gly Ser
      85           90           95
Ser Asn Lys Gly Val Ser
      100

```

<210> 2234  
 <211> 85  
 <212> PRT  
 <213> Pinus radiata

```

      <400> 2234
Gly Ile Asp Met Asn Arg Gly Pro Ala Thr Asn Glu Ser Glu Tyr Ser
      1           5           10           15
Ser Val Phe Gln Ala Asp Ala Leu Arg Thr Ile Asp Thr Gly Ser Val
      20           25           30
Val Val Lys Arg Glu Arg Glu Arg Thr Phe Glu Leu Glu Ala Glu Arg
      35           40           45
Asp Arg Thr Cys Asp Val Ser Ser Arg Thr Ser Asp Glu Glu Glu Ile
      50           55           60
Gly Ser Thr Arg Lys Lys Leu Arg Leu Ser Lys Glu Gln Ser Ala Leu
      65           70           75           80
Leu Glu Glu Ser Phe
      85

```

<210> 2235

<211> 115  
 <212> PRT  
 <213> Pinus radiata

<400> 2235  
 Asn Leu Glu Ser Leu Thr Leu Lys Glu Leu Gln Gln Leu Glu Lys Gln  
 1 5 10 15  
 Leu Gly Arg Ala Ile Lys Lys Ile Tyr Asn Lys Lys Met Lys Ile Ile  
 20 25 30  
 Ser Gln Cys Cys Lys Ser Leu Ser Glu Lys Val Arg Ser Leu Glu Glu  
 35 40 45  
 Glu Asn Ser Glu Leu Leu Thr Lys Leu Ile Pro Arg Ala Asp Ser Ser  
 50 55 60  
 Thr Ser Gly Ala Ala Leu Phe Val Asp Thr Ser Met Pro Lys Ser His  
 65 70 75 80  
 Ser Ala Thr Glu Ala Trp Arg Gln Leu Leu Gln Arg Val Leu Val Thr  
 85 90 95  
 Ala Ala Lys Met Ala Thr Thr Pro Pro Ala Arg His Ser Asn Ser Arg  
 100 105 110  
 Pro Asn His  
 115

<210> 2236  
 <211> 88  
 <212> PRT  
 <213> Pinus radiata

<400> 2236  
 Gly Lys Ala Thr Ser Gly Ser Ala Asn Glu Ala Met Ser Gln Ser Gly  
 1 5 10 15  
 Asp Ser Gly Ser Asp Gly Ser Ser Glu Gly Ser Glu Glu Tyr Asn Thr  
 20 25 30  
 Gln Thr Glu Ser Gln Val Ala Arg Lys Arg Ser Phe Asp Gln Met Ile  
 35 40 45  
 Val Asp Gly Ala Asn Ala Gln Ser Thr Asn Ile Gln Ser Tyr Asn Ser  
 50 55 60  
 Gln Ala Gly Glu Pro Tyr Val Thr Ser Gly Gly His Ala Met Gly Asn  
 65 70 75 80  
 Pro Ile Ser Gln Ala Val Ala Ala  
 85

<210> 2237  
 <211> 66  
 <212> PRT  
 <213> Pinus radiata

<400> 2237  
 Gln Leu Lys Trp Lys Glu Arg Ile Leu Thr Glu Glu Asn Leu Phe Leu  
 1 5 10 15  
 Arg Lys Lys Cys Gly Asp Glu His Val Asp Cys Ser Ala Phe Arg Thr  
 20 25 30  
 Pro Pro Ala Gln Leu Arg Ser Ile Gln Asn Ile Asp Val Glu Thr Gln  
 35 40 45  
 Leu Val Ile Arg Pro Pro Thr Val Gln Gln His Pro Asp Val Asp Ser  
 50 55 60  
 Pro Arg  
 65

<210> 2238  
 <211> 176  
 <212> PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2238

```

Met Gly Arg Thr Pro Cys Cys Leu Lys Val Gly Leu Asn Arg Gly Pro
 1      5      10      15
Trp Thr Pro Glu Asp Leu Cys Leu Ser Asn Tyr Ile Glu Ala His
 20      25      30
Gly Glu Gly Gly Trp Arg Thr Leu Pro Lys Lys Ala Gly Leu Leu Arg
 35      40      45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu Arg Pro Asp
 50      55      60
Val Lys His Gly His Ile Leu Pro Glu Glu Glu Asp Leu Ile Leu Arg
 65      70      75      80
Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Met
 85      90      95
Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Thr His Leu
 100     105     110
Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His Lys Pro
 115     120     125
Leu Ser Glu Ser Glu Asp Ile Cys Ser Ser Pro Gly Asn Ser Glu Val
 130     135     140
Ser Arg Lys Ser Gln Arg Glu Asn Asn Ala Glu Ile Pro Arg Lys Val
 145     150     155     160
Ala Asp Gly Ala Val Asp Ile Gln Asp Lys Glu Glu Asp Ile Thr Glu
 165     170     175

```

&lt;210&gt; 2239

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2239

```

Met Gly Arg Gly Lys Ile Glu Ile Lys Met Ile Glu Asn Thr Ala Asn
 1      5      10      15
Arg Gln Val Thr Phe Ser Lys Arg Lys Gly Gly Leu Leu Lys Lys Ala
 20      25      30
His Glu Leu Ser Val Leu Cys Asn Ala Glu Ile Ala Leu Ile Val Phe
 35      40      45
Ser Asn Thr Gly Lys Leu His Asp Trp Ser Ser Ser Ser Met Lys Lys
 50      55      60
Val Met Glu Lys Tyr Gln Lys Ser Asp Gln Gly Leu Gly Leu Met Asp
 65      70      75      80
Tyr Gln Gln Gln Gln Leu Leu Cys Glu Met Lys Arg Ile Thr Lys Glu
 85      90      95
Asn Glu Ser Leu Arg Ala Arg Leu Arg
 100     105

```

&lt;210&gt; 2240

&lt;211&gt; 78

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2240

```

Met Ser Asn Gly Arg Leu Cys Glu Asp Leu Asp Arg Ile Lys Gly Pro
 1      5      10      15
Trp Ser Pro Glu Glu Asp Ala Ser Leu Gln Arg Leu Val Gln Lys Tyr
 20      25      30
Gly Pro Arg Asn Trp Thr Leu Ile Ser Lys Gly Ile Pro Gly Arg Ser
 35      40      45
Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser Pro Gln Val
 50      55      60

```

Glu His Arg Pro Phe Thr Pro Ser Glu Asp Ala Ala Ile Leu  
 65 70 75

<210> 2241  
 <211> 67  
 <212> PRT  
 <213> Pinus radiata

<400> 2241  
 Met Gly Arg Ala Leu Gly Arg Thr Glu Ile Lys Arg Ile Glu Asn Glu  
 1 5 10 15  
 Val Ser Arg Asn Val Ser Phe Arg Lys Arg Arg Gly Leu Leu Lys  
 20 25 30  
 Lys Ala Ala Glu Leu Ser Ile Leu Cys Asp Ala Thr Val Gly Val Val  
 35 40 45  
 Val Phe Ser Pro Ala Gly Lys Leu Ser Glu Tyr Ala Ser Thr Ser Glu  
 50 55 60  
 Gln Met Asp  
 65

<210> 2242  
 <211> 131  
 <212> PRT  
 <213> Pinus radiata

<400> 2242  
 Ile Arg Asn Pro Thr Asn Arg His Ser Ser Phe Tyr Lys Arg Lys Gly  
 1 5 10 15  
 Gly Leu Leu Lys Lys Ala Phe Glu Leu Ala Val Leu Cys Asp Ala Glu  
 20 25 30  
 Val Ala Leu Ile Ile Phe Ser Glu Thr Gly Arg Ile Tyr Glu Phe Ala  
 35 40 45  
 Ser His Asp Asp Val Thr Thr Val Leu Ala Lys Tyr Arg Ile Gln Thr  
 50 55 60  
 Lys Thr Ala Gly Asn Ala Met Pro Ser Ser Leu Gln Lys Thr Glu Phe  
 65 70 75 80  
 Asp Gln Leu Gln Val Arg Met Leu Gln Glu Lys Ile Asp Asn Leu Glu  
 85 90 95  
 Lys Thr Lys Lys His Met Val Gly Asp Asn Leu Glu Ser Leu Thr Trp  
 100 105 110  
 Lys Glu Leu Gln Gln Val Glu Lys Lys Leu Ser Lys Ala Thr Lys Ile  
 115 120 125  
 Ile Val Ala  
 130

<210> 2243  
 <211> 29  
 <212> PRT  
 <213> Pinus radiata

<400> 2243  
 Gln Pro Val Ala Pro Glu Ser Ile Val Pro Pro His Gln Pro Pro His  
 1 5 10 15  
 Asn Gln Thr Pro Asn Gln Tyr Met Gln Gly Trp Trp Val  
 20 25

<210> 2244  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

&lt;400&gt; 2244

```

Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1          5          10          15
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
          20          25          30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
          35          40          45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp
          50          55          60
Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Ile Ile Lys
65          70          75          80
Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu
          85          90          95
Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr
          100          105

```

&lt;210&gt; 2245

&lt;211&gt; 168

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2245

```

Thr Ala Glu Glu Asp Arg Lys Leu Val Asn Phe Ile Thr Leu His Gly
 1          5          10          15
His Gly Cys Trp Arg Glu Val Pro Lys Leu Ala Gly Leu Leu Arg Cys
          20          25          30
Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro Asp Leu
          35          40          45
Lys Arg Gly Leu Leu Ser Glu Ser Glu Glu Lys Leu Ile Ile Asp Leu
          50          55          60
His Ala Ala Ile Gly Asn Arg Trp Ser Arg Ile Ala Ala Gln Leu Pro
65          70          75          80
Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr Arg Ile Lys
          85          90          95
Lys Lys Leu Arg Gln Met Gly Ile Asp Pro Val Thr His Lys Pro Leu
          100          105          110
Thr Gln Met Gln Met Gln Ser Thr Pro Ala Gln Thr Leu Leu Leu Gln
          115          120          125
Glu Asn Asp Thr Glu Gln Gln Gln Glu Gln His Asn Glu Pro Asp
          130          135          140
Pro Asp Gln Asn Gln Ser Ser Asn Gly Thr Val Glu Thr Leu Val Ser
145          150          155          160
Arg Ala Arg Glu Pro His Asp His
          165

```

&lt;210&gt; 2246

&lt;211&gt; 164

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2246

```

Ser Asp Gly Thr Thr Met Ser Thr Tyr Glu Arg Lys Ala Ser Leu
 1          5          10          15
Arg Glu Phe Tyr Ala Val Ile Tyr Pro Ser Leu Leu Gln Leu Glu Gly
          20          25          30
Gly Ile Thr Glu Met Glu Asp Asn Lys Gln Lys Leu Ile Cys Lys Glu
          35          40          45
Arg Tyr Lys Lys Arg Val Asp Glu Glu Arg Arg His Leu Ser Glu Leu
          50          55          60
Asp Leu Glu Arg Glu Lys Glu Cys Gly Ile Cys Met Glu Thr Gln Thr
65          70          75          80

```

Lys Val Val Leu Pro Asn Cys Ser His Ala Met Cys Leu Asn Cys Tyr  
 85 90 95  
 Arg Glu Trp His Ala Arg Ser Glu Ser Cys Pro Phe Cys Arg Asp Ser  
 100 105 110  
 Leu Lys Arg Val Asn Ser Thr Asp Leu Trp Ile Phe Thr Ser Asn Glu  
 115 120 125  
 Glu Val Val Asp Met Glu Thr Leu Gly Arg Glu Asn Leu Lys Arg Leu  
 130 135 140  
 Phe Asn Tyr Ile Asp Lys Leu Pro Leu Ile Val Pro Glu Ser Leu Phe  
 145 150 155 160  
 Tyr Val Tyr Asp

&lt;210&gt; 2247

&lt;211&gt; 414

&lt;212&gt; PRT

&lt;213&gt; Eucalyptus grandis

&lt;400&gt; 2247

Met Gly Arg His Ser Cys Cys Tyr Lys Gln Lys Leu Arg Lys Gly Leu  
 1 5 10 15  
 Trp Ser Pro Glu Glu Asp Glu Lys Leu Leu Arg His Ile Ser Gln Tyr  
 20 25 30  
 Gly His Gly Cys Trp Ser Ser Val Pro Lys Gln Ala Gly Leu Gln Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
 50 55 60  
 Leu Lys Arg Gly Ala Phe Ser Gln Asp Glu Glu Asp Leu Ile Ile Glu  
 65 70 75 80  
 Leu His Ala Ala Leu Gly Asn Lys Trp Ser Gln Ile Ala Ala Asn Leu  
 85 90 95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Leu Trp Asn Ser Cys Leu  
 100 105 110  
 Lys Lys Lys Leu Arg Gln Arg Gly Ile Asp Pro Val Ser His Arg Pro  
 115 120 125  
 Leu Ser Glu Val Glu Asn Ser Asp Asp Lys Asp Ala Thr Ser Gly Gln  
 130 135 140  
 Thr Gln Asp Lys Val Ser Arg Gly Ser Val Glu Leu Leu Ser Gln Leu  
 145 150 155 160  
 Asn Pro Gln Phe Ser Ser Ser Thr Thr Ala Arg Ser Ser Lys Asn Ser  
 165 170 175  
 Asn Leu Met Ala Pro Thr Leu Ser Lys Asp Thr Val Ala Asp Gly Phe  
 180 185 190  
 Val Ser Asn His Gln Glu Asn Ser Met Met Asn Ser Cys Ile Ser Asp  
 195 200 205  
 Phe Val Asp Asn Phe Ser Leu Gln Gln Leu Asn Tyr Ser Ser Ser Asp  
 210 215 220  
 Ser Arg Phe Ser Asn Leu Cys Phe Thr Gln Thr Gly Arg Ala His Gly  
 225 230 235 240  
 Asn Thr Ile Phe Ser Asp Phe Asn Ser Asn Val Ile Ser Ala Ile Ser  
 245 250 255  
 Pro Pro Ser Ser Asn Ser Leu Phe Pro Thr Ala Ser Met Gly Phe Asn  
 260 265 270  
 Phe Lys Pro Ser Asn Ala Val Pro Ser Ala Asn Ser Thr Ser Ser Ala  
 275 280 285  
 Ser Thr Gly Thr Ala Asp Phe His Asn Ser Gly Ser Tyr Phe Gly Asn  
 290 295 300  
 Ser Leu Val Ser Trp Gly Leu Leu Ala Asp Cys Gly Ser Pro Asp Lys  
 305 310 315 320  
 Glu Gly Ser Thr Ser Ile His Pro Leu Glu Val His Gln Pro Gly Asp  
 325 330 335



Phe Lys Trp Ala Ala Glu Tyr Leu Gln Asn Pro Leu Phe Met Ala Ala  
                   340                  345                  350  
 Ala Leu Gln Asn Gln Ala Gln Glu Gln Ser Asn Leu Tyr Asn Gln Ile  
                   355                  360                  365  
 Lys Pro Glu Thr Gln Phe Pro Pro Asp His Ser Thr Thr Ser Met Trp  
                   370                  375                  380  
 Asp His Leu Gln Gly His Glu Ser Leu Asp Asn Ser Leu Asn Thr Cys  
 385                  390                  395                  400  
 Gly Lys Asp Ile Gln Arg Leu Thr Ala Leu Leu Gly His Asn  
                   405                  410

<210> 2248  
 <211> 205  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2248  
 Met Arg Tyr Pro Ala Pro Ala Ser Arg Gly Lys Ser Thr Ser  
   1                  5                  10                  15  
 Thr Ala Thr Pro Cys Cys Ser Lys Val Gly Ile Lys Arg Gly Pro Trp  
                   20                  25                  30  
 Thr Pro Glu Glu Asp Glu Val Leu Ala Ser Tyr Val Arg Arg Glu Gly  
                   35                  40                  45  
 Glu Gly Arg Trp Arg Thr Leu Pro Lys Arg Ala Gly Leu Gln Arg Cys  
                   50                  55                  60  
 Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu Arg Pro Ser Val  
 65                  70                  75                  80  
 Lys Arg Gly Gln Ile Ala Pro Asp Glu Glu Asp Leu Ile Leu Arg Leu  
                   85                  90                  95  
 His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Ile Pro  
                   100                  105                  110  
 Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Leu Ser  
                   115                  120                  125  
 Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His Lys Pro Leu  
                   130                  135                  140  
 Leu Asn His Asn Pro Ser Ser Ser Leu Ala Ala His Leu Gln Asp Thr  
 145                  150                  155                  160  
 Tyr Asn Ala Ser Thr Phe Thr Pro Lys Ala Thr Tyr Pro Asn Pro Thr  
                   165                  170                  175  
 Val Pro Val Glu Glu Thr Gly Asp Glu Asn Asp Leu Lys Val Gly Arg  
                   180                  185                  190  
 Gln Pro Ala Gly Ser Ala Ser Lys Arg Gly Arg Cys Gln  
                   195                  200                  205

<210> 2249  
 <211> 195  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2249  
 Met Asp Lys Lys Pro Asp Asp Asp Ser Gly Lys Ser Gln Asp Val Glu  
   1                  5                  10                  15  
 Val Arg Lys Gly Pro Trp Thr Met Glu Glu Asp Leu Ile Leu Ile Asn  
                   20                  25                  30  
 Tyr Ile Ala Asn His Gly Glu Gly Ser Trp Asn Ser Leu Ala Lys Ala  
                   35                  40                  45  
 Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn  
                   50                  55                  60  
 Tyr Leu Arg Pro Asp Val Arg Arg Gly Asn Ile Thr Thr Glu Glu Gln  
 65                  70                  75                  80  
 Leu Leu Ile Met Glu Leu His Ala Lys Trp Gly Asn Arg Trp Ser Lys

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      85              90              95
Ile Ala Lys His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Phe
      100              105              110
Trp Arg Thr Arg Ile Gln Lys His Ile Lys Gln Ala Glu Ala Phe Ser
      115              120              125
Gly Gln Ser Ser Glu Met Ser Asp Gln Ala Ser Thr Ser His Met Ser
      130              135              140
Ser Met Pro Glu Pro Met Glu Thr Tyr Asp Ser Pro Pro Ser Phe Gln
      145              150              155              160
Gly Asn Asn Asn Met Glu Pro Leu Pro Val Asn Leu Ser Val Glu Ser
      165              170              175
Asn Glu Ala Tyr Trp Ser Met Asp Asp Leu Trp Ser Met Gln Leu Leu
      180              185              190
Asn Gly Asp
      195

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<210> 2250
<211> 208
<212> PRT
<213> Eucalyptus grandis

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      <400> 2250
Met Asp Lys Lys Pro Cys Tyr Arg Thr Gln Asp Pro Gln Val Arg Lys
  1      5      10      15
Gly Pro Trp Thr Leu Glu Glu Asp Leu Ile Leu Met Asp Tyr Ile Ala
      20      25      30
Asn His Gly Glu Gly Val Trp Asn Ser Leu Ala Lys Ala Ala Gly Leu
      35      40      45
Gln Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg
      50      55      60
Pro Asp Val Arg Arg Gly Asn Ile Thr Pro Glu Glu Gln Leu Leu Ile
      65      70      75      80
Ile His Leu Gln Ser Met Trp Gly Asn Arg Trp Ser Glu Ile Ala Lys
      85      90      95
His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg Thr
      100      105      110
Lys Ile Gln Lys His Ile Ile Lys Gln Ser Glu Thr Glu Ile Asn Asp
      115      120      125
Leu Thr Ile Pro Pro Ser Ser Ala Asn Ala Cys Thr Asp His Arg Gly
      130      135      140
Val Ser Ala Ala Asn Thr Ile Glu Ile Ala Cys Ser Pro Pro Ser Asp
      145      150      155      160
Gln Gly Gly Ser Gly Glu Thr Met Leu Ser Ala Leu Pro Pro Ala Gln
      165      170      175
Glu Pro Asn Asp Ser Ala Cys Trp Ser Val Glu Asp Leu Trp Pro Ile
      180      185      190
Gln Ser Leu Ile Ser Gly Met Gly Asp Asp Ala Gln Tyr Tyr Ser Val
      195      200      205

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<210> 2251
<211> 147
<212> PRT
<213> Eucalyptus grandis

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      <400> 2251
Met Asn Ser Thr Thr Thr Gln Phe Val Ser Ser Arg Arg Met Gly Met
  1      5      10      15
Tyr Asp Pro Ile His Gln Ile Gly Met Trp Asp Glu Asn Phe Lys Gln
      20      25      30
Asn Gly Asn Pro Asn Ala Pro Pro Ala Leu Ile Ile Pro Met His Ala
      35      40      45

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Asn Leu Asp Asn Gln Ser Glu Asp Thr Ser His Gly Ser Gln Asp Thr  
 50 55 60  
 Ala Gly Lys Tyr Glu Gln Glu Thr Ser Lys Pro Tyr Asp Lys Val Gln  
 65 70 75 80  
 Arg Arg Leu Ala Gln Asn Arg Glu Ala Ala Arg Lys Ser Arg Leu Arg  
 85 90 95  
 Lys Lys Ala Tyr Val Gln Gln Leu Glu Ala Ser Arg Leu Lys Leu Met  
 100 105 110  
 Gln Leu Glu Gln Glu Val Asp Arg Ala Arg Gln Gln Gly Val Tyr Met  
 115 120 125  
 Ala Ser Gly Val Asp Ser Ala Tyr Pro Gly Tyr Gly Gly Cys Leu Asn  
 130 135 140  
 Ser Gly Ile  
 145

<210> 2252  
 <211> 43  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2252  
 Met Met Ala Val Thr Ser Ala Cys Lys Asp Lys Met Gly Ile Asp Asn  
 1 5 10 15  
 Gly Lys Tyr Val Arg Tyr Thr Pro Glu Gln Val Glu Ala Leu Glu Arg  
 20 25 30  
 Leu Tyr His Glu Cys Pro Lys Pro Ser Ser Leu  
 35 40

<210> 2253  
 <211> 54  
 <212> PRT  
 <213> Pinus radiata

<400> 2253  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His  
 20 25 30  
 Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Cys Leu Pro  
 35 40 45  
 Ala Leu Cys Phe Leu Asn  
 50

<210> 2254  
 <211> 66  
 <212> PRT  
 <213> Pinus radiata

<400> 2254  
 Met Gly Arg Ala Pro Cys Cys Glu Lys Val Gly Leu Lys Lys Gly Pro  
 1 5 10 15  
 Trp Thr Pro Glu Glu Asp Gln Lys Leu Val Thr Tyr Ile Gln Glu His  
 20 25 30  
 Gly His Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly Asp Tyr Glu  
 35 40 45  
 Phe Ile Phe Ser Ser Arg Thr Cys Lys Lys Phe Ser Val Phe Leu Phe  
 50 55 60  
 Phe Gly  
 65

<210> 2255

<211> 67  
 <212> PRT  
 <213> Pinus radiata

<400> 2255  
 Met Gly Arg Ser Pro Cys Cys Ala Lys Glu Gly Leu Asn Arg Gly Ala  
 1 5 10 15  
 Trp Thr Lys Thr Glu Asp Ile Ile Leu Ser Glu Tyr Ile Arg Ile His  
 20 25 30  
 Gly Asp Gly Gly Trp Arg Ser Leu Pro Lys Lys Ala Gly Leu Lys Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu Arg Pro Asp  
 50 55 60  
 Ile Lys Arg  
 65

<210> 2256  
 <211> 226  
 <212> PRT  
 <213> Pinus radiata

<400> 2256  
 Met Gly Arg Ala Pro Cys Cys Ser Asn Asp Asp Arg Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Gln Tyr Ile Lys Val His  
 20 25 30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
 50 55 60  
 Leu Lys Arg Gly Phe Phe Ser Glu Asp Glu Asp Asp Leu Ile Leu Lys  
 65 70 75 80  
 Leu His Ala Leu Leu Gly Asn Asn Arg Trp Ser Leu Ile Ala Gly Arg  
 85 90 95  
 Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Ser His  
 100 105 110  
 Leu Lys Arg Lys Leu Ile Ser Met Gly Ile Asp Pro Leu Thr His Arg  
 115 120 125  
 Pro Phe Gln Lys Thr Ser His His His Pro Ser Pro Pro Gln Asn Val  
 130 135 140  
 Arg Glu Ala Glu Thr Thr Pro Ser Ile Gly Ile Val Gln Asp Phe Phe  
 145 150 155 160  
 Arg Cys Pro Ser Glu Leu Ser Thr Lys Ser Glu Gln Ile Ser Asp Ala  
 165 170 175  
 Ala Ser Gly Leu Ala Gln Asp Glu Gln Pro His Pro Asn Leu Asn Leu  
 180 185 190  
 Asn Leu Glu Leu Ser Ile Ala Arg Ser Ser Val His Arg Val Ala Glu  
 195 200 205  
 Lys Glu Asp Val Val Asn Ser Gln Gln Gly Glu Ser Asn Leu Ser Glu  
 210 215 220  
 Gly Lys  
 225

<210> 2257  
 <211> 101  
 <212> PRT  
 <213> Pinus radiata

<400> 2257  
 Met Gly Arg Ala Pro Cys Cys Ser Asn Gly Asp Arg Asn Lys Gly Ala  
 1 5 10 15

Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Gln Tyr Ile Lys Val His  
 20 25 30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Asn Ala Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Cys Pro Asp  
 50 55 60  
 Leu Lys Arg Gly Phe Phe Ser Glu Asp Glu Asp Asp Leu Ile Leu Lys  
 65 70 75 80  
 Leu His Ala Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu  
 85 90 95  
 Pro Gly Arg Thr Asp  
 100

&lt;210&gt; 2258

&lt;211&gt; 412

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2258

Met Gly Arg Thr Pro Cys Cys Glu Lys Asn Ile Gly Leu Lys Lys Gly  
 1 5 10 15  
 Pro Trp Thr Pro Glu Glu Asp Gln Lys Leu Ile Asp Tyr Ile Gln Ser  
 20 25 30  
 His Gly His Gly Ser Trp Arg Ala Leu Pro Lys Arg Ala Gly Leu Leu  
 35 40 45  
 Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu Arg Pro  
 50 55 60  
 Asp Ile Lys Arg Gly Gln Phe Ser Phe Glu Glu Glu Gln Thr Ile Ile  
 65 70 75 80  
 Glu Leu His Ala Val Leu Gly Asn Lys Trp Ser Thr Ile Ala Gly His  
 85 90 95  
 Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His  
 100 105 110  
 Leu Lys Lys Arg Leu Leu Gln Met Gly Ile Asp Pro Val Thr His Arg  
 115 120 125  
 Pro Arg Thr Asp Leu Leu Ala Phe Ser Asn Ile Gln Ser Ser Ile Phe  
 130 135 140  
 Asn Thr Pro Gly Phe Gly His Met Ala Gln Trp Glu Ser Ala Arg Leu  
 145 150 155 160  
 Glu Ala Glu Ala Arg Leu Thr Gly Glu Tyr Leu Arg Gln Ala Leu Phe  
 165 170 175  
 Met Ala Gly Asn Gly Ser Ala Thr Ala Asp Leu Leu Met Arg Pro Cys  
 180 185 190  
 Lys Ser Glu Phe Gly Asn Asp Gln Phe Asn Leu Thr Lys Asn Met Gly  
 195 200 205  
 Asn Pro Pro Trp Ile Gln Gln Pro Gly Met Ala Leu Asp Tyr Lys Gly  
 210 215 220  
 Ala Val Pro Gln Ser Leu Glu Gln Phe Leu Gln Thr Asn Val Cys Ser  
 225 230 235 240  
 Ala Ser Asp Ile Asn Gly Gly Gly Cys Leu Ser His Glu Gly Gly Phe  
 245 250 255  
 Asn Ile Thr Lys Phe Ala Ser Pro Cys Ser Thr Leu Asp Gly Ile Gln  
 260 265 270  
 Ile Lys Thr Glu Pro Gln Ser Leu Cys Gly Pro Gln Val Val Lys Asn  
 275 280 285  
 Asp Ser Gln Phe Leu His Ser Glu Gly Asp Leu Arg Lys Gln Ala Met  
 290 295 300  
 Leu Asp Met Asn Val Gly Cys Asn Val Leu Ile Asn Met Asn Ala Glu  
 305 310 315 320  
 Ser Lys Val Ser Phe Gly His Asn Gly Ile Ile Thr Asp Gln Glu Tyr  
 325 330 335

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Asn Asn Leu Gly Gln Ile Asp Asn Asn Asn His Leu Ser His Ala Ala
    340                      345          350
Thr Thr Leu Trp Pro Val Glu Gly Gln Leu Gln Ala Ile Ala Ser Ala
    355                      360          365
Ser Met Pro Gly Leu Ile Ser Ser Thr Ser Cys Thr Ser Asn Asn Ile
    370                      375          380
Tyr Ser Gln Pro Gly Leu Ile Pro Leu Leu Asn Ser Thr Thr Ser Ser
    385                      390          395          400
Met Gly Asp Thr Asn Ser Tyr Arg Glu Ala Gln Pro
    405                      410

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&lt;210&gt; 2259

&lt;211&gt; 391

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2259

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Met Gly Arg Thr Pro Cys Cys Leu Lys Val Gly Leu Asn Arg Gly Pro
  1      5      10      15
Trp Thr Pro Glu Glu Asp Leu Cys Leu Ser Asn Tyr Ile Glu Ala His
    20      25      30
Gly Glu Gly Gly Trp Arg Thr Leu Pro Lys Lys Ala Gly Leu Leu Arg
    35      40      45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu Arg Pro Asp
    50      55      60
Val Lys His Gly His Ile Leu Pro Glu Glu Glu Asp Leu Ile Leu Arg
    65      70      75      80
Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly Arg Met
    85      90      95
Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Thr His Leu
    100     105     110
Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His Lys Pro
    115     120     125
Leu Ser Glu Ser Glu Asp Ile Cys Ser Ser Pro Gly Asn Ser Glu Val
    130     135     140
Ser Arg Lys Ser Gln Arg Glu Asn Asn Ala Glu Ile Pro Arg Lys Val
    145     150     155     160
Ala Asp Gly Ala Val Asp Ile Gln Asp Lys Glu Glu Asp Ile Thr Glu
    165     170     175
Asp Gln Thr Ser Ala Gln Leu Pro Glu Asn Gln Leu Leu Glu Thr Ser
    180     185     190
Asn Ser Gln Cys Pro Ser Val Ala Thr Asp Phe Val Pro Gln Ala Pro
    195     200     205
Ser Ile Pro Ser Thr Ala Tyr Ser Phe Gln Gln Ser Thr Thr Ser Ser
    210     215     220
Val Pro Gly Gly Val Ser Asp Ser Val Asp Val Asn His Asn Lys Gly
    225     230     235     240
Ser Lys Gln Val Pro Phe Pro Leu Ser Asn Thr Ala Cys Phe Asn Ser
    245     250     255
Ser Ala Gln Gly Val Ala Gly Asp Tyr Leu Asp Gln Tyr Leu Met Lys
    260     265     270
Asn Leu Val Thr Asn Ser Asn Asp Leu Ile Thr Ser Thr Val Arg Leu
    275     280     285
Ser Ser Ala Leu Gln Thr Ala Pro Phe Val Gly Gln Phe Asp Ser Asn
    290     295     300
His Val Phe Met Ser Gly Asn Ala Ser Leu Asn Glu Lys His Gln Met
    305     310     315     320
Pro Gln Asn Ser Gln Ala Leu Glu Met Asp Pro His His Ser Phe Ile
    325     330     335
Ala His Pro Ser Glu Glu Gly Thr Tyr Asp Lys Leu Asn His Thr Arg
    340     345     350

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Cys Ala Ala Ser Asp Gln Val Thr Ser Phe Asn Tyr Pro Tyr Leu Ile  
           355                          360                  365  
 Ser His Thr Val Thr Gly Ser Ala Leu Gly Asp Phe Asn Pro Asp Ile  
           370                          375                  380  
 Phe Pro Pro Phe Val Glu Ser  
 385                          390

<210> 2260  
 <211> 144  
 <212> PRT  
 <213> Pinus radiata

<400> 2260  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
   1                  5                  10                  15  
 Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His  
           20                  25                  30  
 Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
           35                  40                  45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
           50                  55                  60  
 Leu Lys Arg Gly Ser Phe Thr Glu Glu Glu Asp Glu Leu Ile Ile Lys  
   65                  70                  75                  80  
 Leu His Ser Phe Val Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu  
           85                  90                  95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile  
           100                  105                  110  
 Lys Arg Lys Leu Leu Ser Lys Gly Leu Asp Pro Gln Thr His Arg Pro  
           115                  120                  125  
 Leu Gly Gln Pro Asn Asn Thr Pro Val Thr Arg Pro Val Leu Glu His  
   130                  135                  140

<210> 2261  
 <211> 255  
 <212> PRT  
 <213> Pinus radiata

<400> 2261  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
   1                  5                  10                  15  
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His  
           20                  25                  30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg  
           35                  40                  45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
           50                  55                  60  
 Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Val Ile Lys  
   65                  70                  75                  80  
 Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu  
           85                  90                  95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile  
           100                  105                  110  
 Lys Arg Lys Leu Leu Asn Arg Gly Leu Asp Pro Gln Ser His Arg Pro  
           115                  120                  125  
 Leu Gly Gln Pro His Asn Ser Asn Thr Thr Cys Pro Ser Leu Pro Ala  
   130                  135                  140  
 Leu Glu His Glu Ile Leu Val Phe Gln Arg Pro Arg Thr Pro Glu Ile  
   145                  150                  155                  160  
 Ala Asp Phe Phe Gln Tyr Glu Arg Ser Glu Ser Ser Pro Met Glu Pro  
           165                  170                  175  
 Ala Thr Ser Lys Asp Ala Glu Glu His Pro Asp Leu Asn Leu Asp Leu

			180					185				190			
Cys	Ile	Ser	Leu	Pro	Val	His	Ser	Pro	Pro	Ala	Thr	Ser	Arg	Ala	Ser
		195						200				205			
Ser	Val	Asp	Gly	Thr	Val	Asp	Ser	Lys	Pro	Asn	Ser	Val	Ser	Cys	His
	210					215					220				
Met	Gly	Leu	Gln	Val	Asn	Tyr	Gly	Val	Gln	Cys	Glu	Asn	Arg	Tyr	Cys
225					230					235					240
Glu	Glu	Ser	Ala	Ser	Gly	Val	Ser	Ser	Phe	Tyr	Thr	Leu	Val	Leu	
				245					250					255	

<210> 2262  
 <211> 162  
 <212> PRT  
 <213> Pinus radiata

<400> 2262

Met	Gly	Thr	Gly	Glu	Met	Gly	Thr	Pro	Ala	Lys	Thr	Thr	Lys	Ala	Ser
1				5					10					15	
Thr	Pro	Gln	Glu	Gln	Pro	Pro	Thr	Ser	Thr	Ala	Met	Leu	Tyr	Pro	Asp
		20						25					30		
Trp	Ala	Ala	Ala	Phe	Gln	Ala	Tyr	Tyr	Asn	Ser	Gly	Thr	Thr	Pro	Pro
	35						40					45			
Pro	Pro	Pro	Ala	Tyr	Phe	His	Ser	Ser	Val	Ala	Ser	Ser	Pro	Gln	Pro
	50					55					60				
His	Pro	Tyr	Met	Trp	Gly	Gly	Gln	Pro	Leu	Met	Pro	Pro	Tyr	Gly	Thr
65					70					75				80	
Leu	Pro	Pro	Pro	Tyr	Ala	Ala	Met	Tyr	His	His	Gly	Ser	Met	Tyr	Ala
				85					90					95	
His	Pro	Ser	Met	Pro	Pro	Gly	Ala	His	Pro	Phe	Ala	Pro	Tyr	Val	Met
			100					105					110		
Thr	Ser	Ser	Leu	Ser	Thr	Thr	Glu	Gly	Ala	Pro	Val	Gly	Thr	Thr	Ser
		115					120					125			
Gly	Ala	Asp	Ala	Glu	Gly	Lys	Pro	Ser	Glu	Pro	Lys	Asp	Gln	Thr	Leu
	130					135					140				
Leu	Lys	Arg	Ser	Lys	Gly	Ser	Leu	Gly	Ser	Leu	Asn	Met	Leu	Thr	Gly
145					150					155					160
Lys	Ile														

<210> 2263  
 <211> 193  
 <212> PRT  
 <213> Pinus radiata

<400> 2263

Met	Gly	Cys	Asn	Gln	Ser	Lys	Val	Glu	Ser	Glu	Glu	Glu	Val	Val	Lys
1				5					10					15	
Ser	Lys	Glu	Arg	Lys	Gln	Phe	Met	Lys	Glu	Ser	Val	Ala	Ala	Arg	Asn
		20						25					30		
Ala	Phe	Ala	Ala	Ala	His	Ser	Ala	Ser	Ile	Thr	Ser	Leu	Lys	Asn	Ile
	35						40					45			
Gly	Ala	Ala	Leu	Asn	Asp	Tyr	Gly	Gln	Gly	Glu	Ser	Lys	Glu	Ser	Leu
	50					55					60				
Ser	Gln	Gly	His	Leu	Pro	Val	Pro	His	Ile	Tyr	Gly	Asp	Pro	Leu	Pro
65					70					75				80	
Pro	Ala	Pro	Pro	Leu	Pro	Pro	Leu	Leu	Pro	Pro	Pro	Arg	Pro	Asp	Glu
				85					90					95	
His	Pro	Ala	Arg	Pro	Leu	Glu	Arg	Ser	Ala	Ser	Ala	Pro	Ala	Ile	Ala
			100					105					110		
Leu	Gln	Gln	Gln	Ala	Glu	Glu	Asp	Arg	Asn	Pro	Glu	Ala	Asn	Ala	Gly
		115					120					125			



Ala Ser Ile Pro Glu Gly Glu Glu Asp Glu Val Glu Glu Glu Glu Asp  
 130 135 140  
 Glu His Leu Val Glu Val Ser His Ser Val Thr Ser Phe Asn Pro Pro  
 145 150 155 160  
 Pro Arg Pro Pro Pro Ser Ser Ser Glu Pro Pro Pro Pro Leu Pro  
 165 170 175  
 Pro Leu Thr Asn Gln Trp Asp Phe Phe Asp Asp Asn Ser Tyr Phe Glu  
 180 185 190  
 Arg

<210> 2264  
 <211> 128  
 <212> PRT  
 <213> Pinus radiata

<400> 2264  
 Met Gly Arg Gly Lys Ile Glu Ile Lys Met Ile Glu Asn Ala Thr Asn  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Gly Gly Leu Lys Lys Lys Ala  
 20 25 30  
 Gln Glu Leu Ser Val Leu Cys Asn Ala Glu Val Ala Leu Ile Ile Phe  
 35 40 45  
 Ser Ser Thr Gly Lys Leu His Glu Trp Ser Ser Ser Ser Ser Phe Phe  
 50 55 60  
 Met Leu Gln Lys Ser Met Lys Lys Ile Leu Glu Arg Tyr Gln Lys Ser  
 65 70 75 80  
 Glu Gln Gly Leu Gly Leu Met Asp Tyr Gln His Gln Gln Leu Leu Cys  
 85 90 95  
 Glu Met Arg Arg Ile Thr Lys Glu Asn Glu Ser Leu Gln Glu Arg Leu  
 100 105 110  
 Arg His Met Asn Gly Glu Glu Val Asn Ser Leu Lys Leu Pro Glu Leu  
 115 120 125

<210> 2265  
 <211> 181  
 <212> PRT  
 <213> Pinus radiata

<400> 2265  
 Met Gly Arg Gly Arg Val Glu Leu Lys Arg Ile Glu Asn Lys Ile Asn  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
 20 25 30  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe  
 35 40 45  
 Ser Ser Arg Gly Lys Leu Tyr Glu Phe Gly Ser Ala Gly Met Leu Lys  
 50 55 60  
 Thr Leu Glu Arg Tyr Gln Lys Cys Ser Tyr Val Leu Gln Asp Ala Thr  
 65 70 75 80  
 Val Ser Asp Arg Glu Ala Gln Asn Trp His Gln Glu Val Gly Lys Leu  
 85 90 95  
 Lys Ala Arg Val Glu Leu Leu Gln Arg Ser Gln Arg His Leu Leu Gly  
 100 105 110  
 Glu Asp Leu Gly Pro Leu Ser Ile Lys Glu Leu Gln Gln Leu Glu Arg  
 115 120 125  
 Gln Leu Glu Val Ala Leu Thr His Val Arg Ser Arg Lys Thr Gln Val  
 130 135 140  
 Met Leu Glu Met Met Asp Glu Leu Arg Arg Lys Glu Arg Ile Leu Gln  
 145 150 155 160  
 Glu Val Asn Lys Ser Leu Arg Lys Lys Leu Gln Glu Ala Glu Gly Gln

165  
 Ala Phe Asn Ala Met  
 180

170  
 175

<210> 2266  
 <211> 107  
 <212> PRT  
 <213> Pinus radiata

<400> 2266  
 Met Asp Leu Met Glu Ser Phe Glu Ala Lys Gly Lys Gly Glu Lys Arg  
 1 5 10 15  
 Arg Thr Val Arg Gly Lys Thr Gln Leu Lys Arg Ile Glu Asn Gly Thr  
 20 25 30  
 Ser Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys  
 35 40 45  
 Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val  
 50 55 60  
 Phe Ser Pro Arg Gly Lys Arg Tyr Glu Phe Ala Asn Pro Ser Met Gln  
 65 70 75 80  
 Lys Met Leu Ala Arg Tyr Glu Asn Phe Ser Glu Gly Ser Lys Ala Thr  
 85 90 95  
 Ser Thr Ala Lys Glu Gln Asp Val Gln Gly Leu  
 100 105

<210> 2267  
 <211> 134  
 <212> PRT  
 <213> Pinus radiata

<400> 2267  
 Ala Arg Gly Lys Thr Gln Met Arg Lys Ile Glu Ser Ala Thr Ser Arg  
 1 5 10 15  
 Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Met Lys Lys Ala Tyr  
 20 25 30  
 Glu Leu Ser Val Leu Cys Asp Ala Gln Leu Gly Leu Ile Val Phe Ser  
 35 40 45  
 Pro Arg Gly Lys Val Tyr Glu Phe Ser Ser Thr Cys Met Gln Lys Met  
 50 55 60  
 Leu Ala Arg Tyr Glu Lys Cys Ser Glu Gly Ser Asp Thr Ser Thr Ser  
 65 70 75 80  
 Lys Glu Gln Asp Val Gln Cys Leu Lys Arg Glu Ser Ala Asn Met Glu  
 85 90 95  
 Glu Arg Ile Glu Ile Leu Glu Ser Met Gln Arg Lys Met Leu Gly Glu  
 100 105 110  
 Glu Leu Ala Ser Cys Ala Leu Lys Asp Leu Asn Gln Leu Glu Ser Gln  
 115 120 125  
 Val Glu Arg Gly Leu Arg  
 130

<210> 2268  
 <211> 138  
 <212> PRT  
 <213> Pinus radiata

<400> 2268  
 Met Gly Arg Gly Arg Val Gln Leu Arg Arg Ile Glu Asn Lys Ile Asn  
 1 5 10 15  
 Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
 20 25 30  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe

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      35              40              45
Ser Thr Arg Gly Lys Leu Tyr Glu Phe Ala Ser Ser Ser Met Asn Lys
      50              55              60
Thr Leu Glu Arg Tyr Glu Lys Cys Ser Tyr Ala Met Gln Asp Thr Thr
      65              70              75              80
Gly Val Ser Asp Arg Glu Ala Gln Asn Trp His Gln Glu Val Thr Lys
      85              90              95
Leu Lys Gly Lys Val Glu Leu Leu Gln Arg Ser Gln Arg His Leu Leu
      100              105              110
Gly Glu Asp Leu Gly Pro Leu Asn Val Lys Glu Leu Gln Gln Leu Glu
      115              120              125
Arg Gln Leu Glu Val Ala Leu Thr His Leu
      130              135

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<210> 2269  
 <211> 141  
 <212> PRT  
 <213> Pinus radiata

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      <400> 2269
Met Gly Lys Lys Arg Val Glu Leu Lys Arg Ile Gln Asn Pro Ser Ser
      1              5              10              15
Arg His Ala Thr Phe Ser Lys Arg Lys Asn Gly Leu Leu Lys Lys Ala
      20              25              30
Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
      35              40              45
Ser Glu Thr Gly Lys Ile Tyr Glu Phe Ala Ser Asn Asn Asp Met Ala
      50              55              60
Ala Ile Leu Gly Lys Tyr Arg Val His Glu Glu Gly Thr Glu Thr Ser
      65              70              75              80
Ser Pro Thr Ser Leu Gln Asn Val Lys Tyr His Glu Ser Gly Leu Glu
      85              90              95
Lys Leu Gln Glu Lys Leu Thr Ala Leu Gln Lys Lys Glu Lys Asn Leu
      100              105              110
Ile Gly Glu Asp Leu Glu Val Leu Thr Met Lys Glu Leu Gln Arg Leu
      115              120              125
Glu Lys Gln Leu Gln Ile Gly Ile Lys Arg Leu Val Ile
      130              135              140

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<210> 2270  
 <211> 135  
 <212> PRT  
 <213> Pinus radiata

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      <400> 2270
Met Gly Lys Lys Lys Val Glu Val Lys Leu Ile Gln Asn Pro Thr Ser
      1              5              10              15
Arg Gln Gly Cys Phe Tyr Asn Arg Lys Cys Gly Leu Leu Lys Lys Ala
      20              25              30
Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Ile Phe
      35              40              45
Ser Gln Thr Gly Lys Ile Tyr Glu Phe Ala Ser His Asp Asp Val Asn
      50              55              60
Ala Ile Leu Ala Lys Tyr Arg Ile Gln Thr Gly Thr Thr Thr Asn Ala
      65              70              75              80
Met Pro Ser Ser Leu Gln Asn Thr Glu Pro Glu Thr Leu His Glu Glu
      85              90              95
Thr Asn Met Leu Gly Lys Arg Lys Lys Val Glu Lys Leu His Glu Lys
      100              105              110
Ile Asn Met Leu Glu Lys Arg Gly Lys Asn Met Val Gly Glu Asn Leu
      115              120              125

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Glu Ser Leu Thr Val Asn Glu  
130 135

<210> 2271  
<211> 118  
<212> PRT  
<213> Pinus radiata

<400> 2271  
Met Ala Arg Gly Lys Thr Gln Met Lys Lys Ile Glu Asn Val Thr Ser  
1 5 10 15  
Arg Gln Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala  
20 25 30  
Phe Glu Leu Ser Val Leu Cys Asp Ala Glu Val Gly Leu Ile Val Phe  
35 40 45  
Ser Pro Ser Gly Lys Leu Tyr Glu Phe Ser Arg Pro Cys Met Gly Lys  
50 55 60  
Leu Leu Glu Lys Tyr Glu Lys Asn Ser Arg Glu Ser Gly Ile Asn Asn  
65 70 75 80  
Ala Ala Lys Glu Lys Asp Thr Gln His Ser Lys Arg Glu Ile Ala Asn  
85 90 95  
Met Glu Glu Lys Ile Arg Ile Leu Glu Ser Thr Glu Arg Lys Met Leu  
100 105 110  
Gly Gln Asn Leu Ala Ser  
115

<210> 2272  
<211> 147  
<212> PRT  
<213> Pinus radiata

<400> 2272  
Met Asp Ser Phe Glu Ala Lys Gly Lys Gly Glu Lys Arg Arg Thr Val  
1 5 10 15  
Arg Gly Lys Thr Gln Met Lys Arg Ile Glu Asn Ala Thr Ser Arg Gln  
20 25 30  
Val Thr Phe Ser Lys Arg Arg Asn Gly Leu Leu Lys Lys Ala Tyr Glu  
35 40 45  
Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Met Val Phe Ser Pro  
50 55 60  
Arg Gly Lys Leu Tyr Glu Phe Ala Asn Pro Ser Met Gln Lys Met Leu  
65 70 75 80  
Glu Arg Tyr Glu Lys Cys Ser Glu Gly Ser Lys Thr Thr Ser Ile Ala  
85 90 95  
Lys Glu Glu Asp Pro Lys Ala Leu Lys Arg Glu Ile Ala Asn Met Glu  
100 105 110  
Glu Arg Ile Glu Ile Leu Glu Arg Thr Gln Arg Lys Met Leu Gly Glu  
115 120 125  
Glu Leu Ala Ser Cys Ala Leu Lys Asp Leu Asn Gln Leu Glu Ser Gln  
130 135 140  
Val Glu Arg  
145

<210> 2273  
<211> 113  
<212> PRT  
<213> Pinus radiata

<400> 2273  
Met Gly Arg Gly Lys Ile Glu Ile Lys Lys Ile Glu Asn Ser Val His  
1 5 10 15

Arg Gln Val Thr Phe Cys Lys Arg Arg Gly Gly Leu Met Lys Lys Ala  
 20 25 30  
 Tyr Glu Leu Ser Val Leu Cys Asp Ala Asp Val Ala Leu Ile Val Phe  
 35 40 45  
 Ser Ser Arg Gly Lys Leu Tyr Glu Leu Gly Thr Ser Asn Asn Asn Asn  
 50 55 60  
 Asn Ser Met Arg Ser Ile Leu Glu Arg Tyr Gln Lys Cys Ser Gln Thr  
 65 70 75 80  
 Ala Lys His Met Asn Phe Ser Asn Asn Thr Ser Asp Glu Lys Met Lys  
 85 90 95  
 Gln Glu Ile Asn Leu Leu Lys Gln Gln Ile Gly Ser Ala Lys Leu Thr  
 100 105 110  
 Asn

<210> 2274  
 <211> 97  
 <212> PRT  
 <213> Pinus radiata

<400> 2274  
 Ser Trp Lys Ala Asn Pro Cys Thr Val Pro Ser Ser Arg Ile Gly Gly  
 1 5 10 15  
 Phe Gly Gly Gly Gln Val Ile Leu Pro Leu Ala His Thr Val Glu His  
 20 25 30  
 Glu Glu Phe Leu Glu Val Ile Lys Leu Glu Asn His Gly Leu Thr Gln  
 35 40 45  
 Glu Glu Ala Leu Leu Ser Arg Asp Met Phe Leu Leu Gln Leu Cys Ser  
 50 55 60  
 Gly Leu Asp Glu Asn Ala Val Gly Ala Cys Ala Glu Leu Val Phe Ala  
 65 70 75 80  
 Pro Ile Asp Ala Ser Leu Ala Asp Ser Ser Pro Leu Leu Pro Ser Gly  
 85 90 95  
 Phe

<210> 2275  
 <211> 157  
 <212> PRT  
 <213> Pinus radiata

<400> 2275  
 Ser Val Asp Val Leu Thr Ala Phe Ser Thr Gly Asn Gly Gly Thr Ile  
 1 5 10 15  
 Glu Leu Leu Tyr Met Gln Met Tyr Ala Pro Thr Thr Leu Ala Ser Ala  
 20 25 30  
 Arg Asp Phe Trp Thr Leu Arg Tyr Thr Ser Val Leu Glu Asp Gly Ser  
 35 40 45  
 Leu Val Val Cys Glu Arg Ser Leu Ser Gly Thr Gln Gly Gly Pro Ser  
 50 55 60  
 Met Pro Ala Val Gln Gln Phe Val Arg Ala Glu Met Gln Pro Ser Gly  
 65 70 75 80  
 Tyr Leu Ile Arg Pro Cys Glu Gly Gly Gly Ser Leu Ile His Ile Val  
 85 90 95  
 Asp His Met Asp Leu Glu Pro Trp Ser Val Pro Glu Val Leu Arg Pro  
 100 105 110  
 Leu Tyr Glu Ser Ser Thr Val Leu Ala Gln Lys Val Thr Met Ser Ala  
 115 120 125  
 Leu Arg His Leu Arg Gln Ile Ala Gln Glu Ala Ser Ser Asp Val Val  
 130 135 140  
 Leu Gly Trp Gly Arg Gln Pro Ala Ala Leu Arg Thr Phe

145

150

155

<210> 2276  
 <211> 327  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2276

Met	Val	Ser	Val	Asn	Pro	Asn	Pro	Ala	Gln	Gly	Phe	Tyr	Phe	Phe	Asp
1				5					10					15	
Pro	Ala	Asn	Thr	Arg	Ile	His	Gly	Val	Asn	Ala	Gly	Ser	Ala	Ala	Glu
			20					25					30		
Gly	Gly	Gly	Ala	Ala	Pro	Pro	Tyr	Ala	Glu	Asp	Pro	Ser	Lys	Lys	Val
			35				40					45			
Arg	Lys	Pro	Tyr	Thr	Ile	Thr	Lys	Ser	Arg	Glu	Ser	Trp	Thr	Glu	Gln
	50					55					60				
Glu	His	Asp	Lys	Phe	Leu	Glu	Ala	Leu	His	Leu	Phe	Asp	Arg	Asp	Trp
65					70					75				80	
Lys	Lys	Ile	Glu	Ala	Phe	Val	Gly	Ser	Lys	Thr	Val	Ile	Gln	Ile	Arg
				85					90					95	
Ser	His	Ala	Gln	Lys	Tyr	Phe	Leu	Lys	Val	Gln	Lys	Asn	Gly	Thr	Ser
			100					105					110		
Glu	His	Val	Pro	Pro	Pro	Arg	Pro	Lys	Arg	Lys	Ala	Ala	His	Pro	Tyr
		115					120					125			
Pro	Gln	Lys	Ala	Pro	Lys	Ala	Pro	Val	Val	Ser	Gln	Val	Asn	Gly	Pro
						135					140				
Phe	Gln	Val	Ser	Ser	Ala	Phe	Leu	Glu	Pro	Gly	His	Ile	Val	Arg	Pro
145					150					155					160
Asp	Gly	Ser	Ala	Leu	Gly	Asn	Ser	Arg	Thr	Ser	Val	Ala	Leu	Ser	
				165				170					175		
Ser	Trp	Ser	His	Asn	Ser	Val	Pro	Ala	Met	Ser	Ala	Ser	Gln	Gly	Thr
			180					185					190		
Lys	Asp	Val	Gly	Ile	Ser	Gly	Pro	Pro	Val	Pro	Ser	Asn	Cys	Cys	Asn
		195					200					205			
Ser	Ser	Ser	Asn	Asp	Ser	Thr	Pro	Arg	Ser	Trp	Pro	Asn	Ala	Gln	Ala
		210				215					220				
Ile	Glu	Pro	Leu	Asp	Gln	Gln	Lys	His	Leu	Arg	Val	Met	Pro	Asp	Phe
225					230					235					240
Ala	Gln	Val	Tyr	Arg	Phe	Ile	Gly	Ser	Val	Phe	Asp	Pro	Asp	Ala	Gly
				245						250				255	
Gly	His	Leu	Gln	Arg	Leu	Lys	Gln	Met	Asp	Pro	Ile	Asn	Leu	Glu	Thr
			260					265					270		
Val	Val	Leu	Leu	Met	Lys	Asn	Leu	Ser	Ala	Asn	Leu	Thr	Ser	Pro	Glu
		275					280					285			
Phe	Glu	Lys	Tyr	Gln	His	Gly	Leu	Phe	Ala	Ser	Tyr	Glu	Gly	Gly	Pro
	290					295					300				
Glu	Lys	Ser	Lys	Ser	Gly	Gly	Ser	Phe	Lys	Leu	Leu	Pro	Glu	Lys	Ser
305					310					315					320
Gly	Ser	Leu	Ile	Leu	Ser	Ala									
				325											

<210> 2277  
 <211> 225  
 <212> PRT  
 <213> Pinus radiata

<400> 2277

Met	Gly	Arg	Ser	Pro	Cys	Cys	Glu	Lys	Ala	His	Thr	Asn	Lys	Gly	Ala
1				5					10					15	
Trp	Thr	Lys	Gln	Glu	Asp	Asp	Arg	Leu	Ile	Ala	His	Ile	Arg	Ala	His
			20					25					30		

Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
           35                  40                  45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu Arg Pro Asp  
       50                  55                  60  
 Leu Lys Arg Gly Ser Phe Thr Glu Glu Asp Glu Leu Ile Ile Lys  
 65                  70                  75                  80  
 Leu His Ser Phe Val Gly Asn Lys Trp Ser Leu Ile Ala Gly Arg Leu  
           85                  90                  95  
 Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr His Ile  
           100                  105                  110  
 Lys Arg Lys Leu Leu Ser Lys Gly Leu Asp Pro Gln Thr His Arg Pro  
           115                  120                  125  
 Leu Gly Gln Pro Asn Asn Thr Pro Val Thr Arg Pro Val Leu Glu His  
           130                  135                  140  
 Glu Ile Pro Ala Phe Gln Asn Pro Ala Thr Pro Glu Ile Ala Asp Leu  
 145                  150                  155                  160  
 Leu Gln His His Arg Leu Glu Ser Ser Pro Ile Lys Pro Ala Ala Ser  
           165                  170                  175  
 Asp Ala Glu Glu His Pro Asp Leu Asn Leu Asn Leu Cys Ile Ser Leu  
           180                  185                  190  
 Pro Ser Asn Ser Ala Pro Ala Val Asn Arg Val Ser Ser Val Asp Thr  
           195                  200                  205  
 Thr Val Asp Ser Asn Ser Asn Ser Gly Asp Gly Leu Cys Trp Gln Phe  
           210                  215                  220  
 Leu  
 225

<210> 2278  
 <211> 69  
 <212> PRT  
 <213> Pinus radiata

<400> 2278  
 Met Leu Leu Gln Asn Val Pro Pro Ala Leu Leu Val Arg Phe Leu Arg  
       1                  5                  10                  15  
 Glu His Arg Ser Glu Trp Ala Asp Cys Asn Ile Asp Ala Tyr Ser Ser  
           20                  25                  30  
 Ala Thr Met Lys Ala Asn Ala Tyr Asn Val Pro Gly Ser Leu Gly Gly  
           35                  40                  45  
 Ile Thr Gly Ser Gln Val Ile Leu Pro Leu Ala His Thr Val Glu His  
           50                  55                  60  
 Glu Glu Phe Leu Glu  
 65

<210> 2279  
 <211> 65  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2279  
 Met Ala Arg Phe Pro Arg Val Asp Lys Ser Asn Ser Lys Lys Thr Val  
       1                  5                  10                  15  
 Lys Lys Gly Ala Trp Ser Ala Glu Glu Asp Gln Lys Leu Val Ala Tyr  
           20                  25                  30  
 Ile Lys Arg Tyr Gly Ile Trp Asn Trp Thr His Met Ala Glu Pro Ala  
           35                  40                  45  
 Gly Leu Ala Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr  
           50                  55                  60  
 Leu  
 65

<210> 2280  
 <211> 39  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2280  
 Pro Asn Ile Lys His Gly Asn Ile Thr Gln Glu Glu Glu Glu Ile Ile  
 1 5 10 15  
 Ile Asn Leu His Arg Val Leu Gly Asn Arg Trp Ala Ser Ile Ala Ser  
 20 25 30  
 Arg Leu Ser Gly Arg Thr Asp  
 35

<210> 2281  
 <211> 59  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2281  
 Arg Lys Pro Cys Cys Asp Lys Gln Asp Thr Asn Lys Gly Ala Trp Ser  
 1 5 10 15  
 Lys Gln Glu Asp Gln Lys Leu Ile Asp Tyr Ile Arg Lys His Gly Glu  
 20 25 30  
 Gly Cys Trp Arg Thr Leu Pro Lys Ala Ala Gly Leu Leu Arg Cys Gly  
 35 40 45  
 Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
 50 55

<210> 2282  
 <211> 48  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2282  
 Pro Asp Leu Lys Arg Gly Asn Phe Ala Glu Asp Glu Glu Asp Leu Ile  
 1 5 10 15  
 Ile Lys Leu His Ala Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly  
 20 25 30  
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Ser  
 35 40 45

<210> 2283  
 <211> 19  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2283  
 Cys Cys Ser Lys Lys Ala Val Lys Arg Gly Phe Trp Ser Pro Glu Glu  
 1 5 10 15  
 Asp Leu Lys

<210> 2284  
 <211> 45  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2284  
 Trp Thr Arg Glu Glu Asp Asn Leu Leu Ile His Ser Ile Thr Cys His  
 1 5 10 15  
 Gly Glu Gly Arg Trp Asn Met Leu Ala Lys Ser Ala Gly Leu Lys Arg



20 25 30  
 Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu  
 35 40 45

<210> 2285  
 <211> 57  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2285  
 Arg Pro Asp Ile Lys Arg Gly Asn Leu Thr Pro Gln Glu Gln Leu Met  
 1 5 10 15  
 Ile Leu Glu Leu His His Lys Trp Gly Asn Arg Trp Ser Lys Ile Ala  
 20 25 30  
 Gln Tyr Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg  
 35 40 45  
 Thr Arg Val Gln Lys Gln Ala Arg Gln  
 50 55

<210> 2286  
 <211> 57  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2286  
 Met Ala Ser Arg Lys Glu Val Asp Arg Ile Lys Gly Pro Trp Ser Pro  
 1 5 10 15  
 Glu Glu Asp Glu Ala Leu Arg Leu Leu Val Gln Lys His Gly Pro Arg  
 20 25 30  
 Asn Trp Ser Leu Ile Ser Lys Ser Ile Pro Gly Arg Ser Gly Lys Ser  
 35 40 45  
 Cys Arg Leu Arg Trp Cys Asn Gln Leu  
 50 55

<210> 2287  
 <211> 68  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2287  
 Ser Pro Gln Val Glu His Arg Ala Phe Thr Pro Glu Glu Asp Asp Ile  
 1 5 10 15  
 Ile Val Arg Ala His Ala Arg Phe Gly Asn Lys Trp Ala Thr Ile Ala  
 20 25 30  
 Arg Leu Leu Ser Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn  
 35 40 45  
 Ser Thr Leu Lys Arg Lys Cys Ser Pro Pro Leu Ser Pro Leu Ala Glu  
 50 55 60  
 Glu Gly Asn Asn  
 65

<210> 2288  
 <211> 61  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2288  
 Met Gly Arg His Ser Cys Cys Tyr Lys Gln Lys Leu Arg Lys Gly Leu  
 1 5 10 15  
 Trp Ser Pro Glu Glu Asp Glu Lys Leu Leu Arg Tyr Ile Thr Gln Tyr  
 20 25 30

Gly His Gly Cys Trp Ser Ser Val Pro Lys Leu Ala Gly Leu Gln Arg  
           35                          40                          45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
       50                          55                          60

<210> 2289  
 <211> 78  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2289  
 Gly Ser Ser Pro Ile Asp Gly Ser Asp Gly Tyr Leu Ser Asp Asp Pro  
   1                          5                          10                          15  
 Ala Pro Gly Ser Arg Ser Ser Asn Arg Arg Val Glu Arg Lys Lys Gly  
           20                          25                          30  
 Asn Pro Trp Thr Glu Glu Glu His Arg Arg Phe Leu Ile Gly Leu Gln  
           35                          40                          45  
 Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asp Phe Val Thr  
       50                          55                          60  
 Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys Tyr  
       65                          70                          75

<210> 2290  
 <211> 53  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2290  
 Lys Lys Gly Asn Pro Trp Thr Glu Glu Glu His Arg Arg Phe Leu Ile  
   1                          5                          10                          15  
 Gly Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asp  
           20                          25                          30  
 Phe Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys  
           35                          40                          45  
 Tyr Tyr Ile Arg Gln  
       50

<210> 2291  
 <211> 59  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2291  
 Arg Lys Pro Cys Cys Asp Lys Arg Asp Thr Asn Lys Gly Ala Trp Ser  
   1                          5                          10                          15  
 Lys Gln Glu Asp Gln Lys Leu Ile Asp Tyr Ile Gln Lys His Gly Glu  
           20                          25                          30  
 Gly Ser Trp Arg Thr Leu Pro Gln Ala Ala Gly Leu Leu Arg Cys Gly  
           35                          40                          45  
 Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
       50                          55

<210> 2292  
 <211> 65  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2292  
 Pro Asp Leu Lys Arg Gly Asn Phe Ala Glu Asp Glu Glu Asp Leu Ile  
   1                          5                          10                          15  
 Ile Lys Leu His Ala Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly

20 25 30  
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Ser  
 35 40 45  
 His Leu Arg Arg Lys Leu Leu Lys Met Gly Ile Asp Pro Asn Asn His  
 50 55 60  
 Arg  
 65

<210> 2293  
 <211> 54  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2293  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Glu Glu Asp Gln Arg Leu Ile Asp Tyr Ile Arg Leu His  
 20 25 30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ser Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg  
 50

<210> 2294  
 <211> 65  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2294  
 Met Ala Arg Phe Pro Arg Val Asp Lys Ser Asn Ser Lys Lys Thr Val  
 1 5 10 15  
 Lys Lys Gly Ala Trp Ser Ala Glu Glu Asp Gln Lys Leu Val Ala Tyr  
 20 25 30  
 Ile Lys Arg Tyr Gly Ile Trp Asn Trp Thr His Met Ala Glu Pro Ala  
 35 40 45  
 Gly Leu Ala Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr  
 50 55 60  
 Leu  
 65

<210> 2295  
 <211> 40  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2295  
 Arg Pro Asn Ile Lys His Gly Asn Ile Thr Gln Glu Glu Glu Ile  
 1 5 10 15  
 Ile Ile Asn Leu His Arg Val Leu Gly Asn Arg Trp Ala Ser Ile Ala  
 20 25 30  
 Ser Arg Leu Ser Gly Arg Thr Asp  
 35 40

<210> 2296  
 <211> 41  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2296  
 Arg Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Thr Phe Leu Met  
 1 5 10 15

Gly Leu Glu Lys Met Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn  
                   20                  25                  30  
 Tyr Val Thr Thr Arg Thr Pro Thr Gln  
                   35                  40

<210> 2297  
 <211> 31  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2297  
 Arg Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Thr Phe Leu Met  
   1                  5                  10                  15  
 Gly Leu Glu Lys Met Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg  
                   20                  25                  30

<210> 2298  
 <211> 44  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2298  
 Glu Val Arg Lys Gly Pro Trp Thr Glu Gln Glu Asp Phe Gln Leu Val  
   1                  5                  10                  15  
 Cys Phe Val Gly Leu Phe Gly Asp Arg Arg Trp Asp Phe Ile Ala Lys  
                   20                  25                  30  
 Val Ser Gly Leu Lys Val Ala Gly Glu Asn Asn Arg  
                   35                  40

<210> 2299  
 <211> 61  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2299  
 Met Gly Arg Ser Pro Cys Cys Glu Ser Glu His Met Asn Lys Gly Ala  
   1                  5                  10                  15  
 Trp Ser Lys Glu Glu Asp Glu Arg Leu Ile Ala Tyr Ile Lys Arg His  
                   20                  25                  30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
                   35                  40                  45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
                   50                  55                  60

<210> 2300  
 <211> 67  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2300  
 Pro Asp Leu Lys Arg Gly Asn Phe Ser Asp Glu Glu Asp Glu Leu Ile  
   1                  5                  10                  15  
 Ile Thr Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Ala  
                   20                  25                  30  
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr  
                   35                  40                  45  
 His Ile Lys Arg Lys Leu His Ala Arg Gly Ile Asp Pro Gln Thr His  
                   50                  55                  60  
 Arg Pro Leu  
 65

<210> 2301  
 <211> 50  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2301  
 Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Leu Phe Leu Leu  
 1 5 10 15  
 Gly Leu Gln Lys Val Gly Lys Gly Asp Trp Arg Ala Ile Ser Arg Asn  
 20 25 30  
 Phe Val Lys Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys  
 35 40 45  
 Tyr Phe  
 50

<210> 2302  
 <211> 53  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2302  
 Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Leu Phe Leu Leu  
 1 5 10 15  
 Gly Leu Gln Lys Val Gly Lys Gly Asp Trp Arg Ala Ile Ser Arg Asn  
 20 25 30  
 Phe Val Lys Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys  
 35 40 45  
 Tyr Phe Leu Arg Arg  
 50

<210> 2303  
 <211> 64  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2303  
 Met Ala Ser Ser Ser Ser Val Ala Ser Ala Arg Lys Asp Ala Asp Arg  
 1 5 10 15  
 Ile Lys Gly Pro Trp Ser Pro Glu Glu Asp Glu Ala Leu Gln Arg Leu  
 20 25 30  
 Val Gln Ser Tyr Gly Pro Arg Asn Trp Ser Leu Ile Ser Lys Ser Ile  
 35 40 45  
 Pro Gly Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu  
 50 55 60

<210> 2304  
 <211> 98  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2304  
 Ser Pro Gln Val Glu His Arg Pro Phe Thr Pro Glu Glu Asp Glu Ala  
 1 5 10 15  
 Ile Val Arg Ala His Ala Arg Phe Gly Asn Lys Trp Ala Thr Ile Ala  
 20 25 30  
 Arg Leu Leu Asn Gly Arg Thr Asp Asn Ala Val Lys Asn His Trp Asn  
 35 40 45  
 Ser Thr Leu Lys Arg Lys Cys Ser Ser Thr Cys Ser Ala Gly Gly Asp  
 50 55 60  
 Asp Ala Asp Ala Leu Ala Glu Gln Gln Pro Leu Lys Arg Ser Ala Ser  
 65 70 75 80

Leu Gly Thr Pro Thr Gly Gly Asn Asn Ala Val Ser Asp Leu Phe Phe  
85 90 95  
Ser Pro

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<210> 2305
<211> 50
<212> PRT
<213> Eucalyptus grandis
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[illegible]

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<210> 2306
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<212> PRT
<213> Eucalyptus grandis
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			<400>	2306												
Pro	Asp	Leu	Lys	Arg	Gly	Ala	Phe	Ser	Pro	Gln	Glu	Glu	Glu	Leu	Ile	
1				5					10					15		
Ile	His	Leu	His	Ser	Ile	Leu	Gly	Asn	Arg	Trp	Ser	Gln	Ile	Ala	Ala	
			20					25					30			
Arg	Leu	Pro	Gly	Arg	Thr	Asp	Asn	Glu	Ile	Lys	Asn	Phe	Trp	Asn	Ser	
		35				40						45				
Thr	Ile	Lys	Lys	Arg	Ser	Arg	Thr	Arg	His	His	Leu					
	50					55					60					

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<210> 2307
<211> 44
<212> PRT
<213> Eucalyptus grandis
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      <400> 2307
Lys Leu Asp Phe Ser Glu Asp Glu Glu Thr Leu Val Ile Arg Met Tyr
 1          5          10          15
Asn Leu Val Gly Glu Arg Trp Ser Leu Ile Ala Gly Arg Ile Pro Gly
 20          25          30
Arg Thr Ala Glu Glu Ile Glu Lys Tyr Trp Asn Ser
 35          40

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<210> 2308
<211> 61
<212> PRT
<213> Eucalyptus grandis
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<400> 2308															
Met	Gly	Arg	Gln	Pro	Cys	Cys	Asp	Lys	Leu	Gly	Val	Lys	Lys	Gly	Pro
1				5					10					15	
Trp	Thr	Ala	Glu	Glu	Asp	Arg	Lys	Leu	Val	Asn	Phe	Ile	Leu	Thr	His
			20					25					30		
Gly	Gln	Cys	Cys	Trp	Arg	Ala	Val	Pro	Lys	Leu	Ala	Gly	Leu	Arg	Arg
		35					40					45			
Cys	Gly	Lys	Ser	Cys	Arg	Leu	Arg	Trp	Thr	Asn	Tyr	Leu			

50

55

60

<210> 2309  
 <211> 64  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2309  
 Pro Asp Leu Lys Arg Gly Leu Leu Asn Glu Ala Glu Glu Ser Leu Val  
 1 5 10 15  
 Ile Asp Leu His Ala Thr Leu Gly Asn Arg Trp Ser Lys Ile Ala Ala  
 20 25 30  
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn His Trp Asn Thr  
 35 40 45  
 His Ile Lys Lys Lys Leu Ile Arg Met Gly Ile Asp Pro Val Thr His  
 50 55 60

<210> 2310  
 <211> 61  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2310  
 Met Gly Arg Gln Pro Cys Cys Asp Lys Ser Gly Val Lys Lys Gly Pro  
 1 5 10 15  
 Trp Thr Ala Glu Glu Asp Lys Lys Leu Ile Asn Phe Ile Leu Thr Asn  
 20 25 30  
 Gly His Cys Cys Trp Arg Ala Val Pro Lys Leu Ala Gly Leu Arg Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu  
 50 55 60

<210> 2311  
 <211> 67  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2311  
 Pro Asp Leu Lys Arg Gly Leu Leu Ser Glu Ala Glu Glu Gln Leu Val  
 1 5 10 15  
 Ile Asp Leu His Ala Arg Leu Gly Asn Arg Trp Ser Lys Ile Ala Ala  
 20 25 30  
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn His Trp Asn Thr  
 35 40 45  
 His Ile Lys Lys Lys Leu Leu Lys Met Gly Ile Asp Pro Val Thr His  
 50 55 60  
 Glu Pro Leu  
 65

<210> 2312  
 <211> 50  
 <212> PRT  
 <213> Pinus radiata

<400> 2312  
 Lys Lys Gly Val Pro Trp Ser Glu Glu Glu His Arg Met Phe Leu Tyr  
 1 5 10 15  
 Gly Leu Glu Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn  
 20 25 30  
 Phe Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys  
 35 40 45

Tyr Phe  
50

<210> 2313  
<211> 53  
<212> PRT  
<213> Pinus radiata

<400> 2313  
Lys Lys Gly Val Pro Trp Ser Glu Glu Glu His Arg Met Phe Leu Tyr  
1 5 10 15  
Gly Leu Glu Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ser Arg Asn  
20 25 30  
Phe Val Thr Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys  
35 40 45  
Tyr Phe Leu Arg Gln  
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<210> 2314  
<211> 60  
<212> PRT  
<213> Pinus radiata

<400> 2314  
Gly Lys Ser Pro Gly His Asp Glu Pro Asp Arg Ile Lys Gly Pro Trp  
1 5 10 15  
Ser Pro Glu Glu Asp Ala Ala Leu Gln His Phe Val Gln Lys Tyr Gly  
20 25 30  
Pro Arg Asn Trp Ser Leu Ile Ser Lys Ala Ile Pro Gly Arg Ser Gly  
35 40 45  
Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser  
50 55 60

<210> 2315  
<211> 60  
<212> PRT  
<213> Pinus radiata

<400> 2315  
Pro Gln Val Glu His Arg Pro Phe Thr Pro Glu Glu Asp Ala Thr Ile  
1 5 10 15  
Val Arg Ala His Ala Gln His Gly Asn Lys Trp Ala Thr Ile Ala Arg  
20 25 30  
Met Leu Ser Gly Arg Thr Asp Asn Ala Ile Lys Asn His Trp Asn Ser  
35 40 45  
Thr Leu Arg Arg Arg Cys Gln Gly Gly Gly Ala Leu  
50 55 60

<210> 2316  
<211> 20  
<212> PRT  
<213> Pinus radiata

<400> 2316  
Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Val  
1 5 10 15  
Gly Leu Gln Arg  
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<210> 2317  
<211> 18



<212> PRT  
<213> Pinus radiata

<400> 2137  
Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Val  
1 5 10 15  
Gly Leu

<210> 2318  
<211> 10  
<212> PRT  
<213> Pinus radiata

<400> 2318  
Lys Arg Gly Val Pro Trp Thr Glu Glu Glu  
1 5 10

<210> 2319  
<211> 14  
<212> PRT  
<213> Pinus radiata

<400> 2319  
Lys Arg Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe  
1 5 10

<210> 2320  
<211> 68  
<212> PRT  
<213> Pinus radiata

<400> 2320  
Met Arg Cys Thr Arg Trp Gln Gly Leu Pro Phe Ser Ser Lys Pro Lys  
1 5 10 15  
Val Lys Lys Gly Leu Trp Ser Pro Glu Glu Asp Glu Lys Leu Ile Asn  
20 25 30  
Tyr Met Met Lys Asn Gly Leu Leu Gly Cys Ser Trp Ser Tyr Val Ala  
35 40 45  
Lys Gln Ile Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp  
50 55 60  
Thr Asn Tyr Leu  
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<210> 2321  
<211> 62  
<212> PRT  
<213> Pinus radiata

<400> 2321  
Met Gly Arg Ala Pro Cys Cys Asp Lys Ala Asn Val Lys Lys Gly Pro  
1 5 10 15  
Trp Ser Pro Glu Glu Asp Thr Lys Leu Lys Ala Phe Ile Glu Gln His  
20 25 30  
Gly Thr Gly Gly Asn Trp Ile Ala Leu Pro Gln Lys Ala Gly Leu Lys  
35 40 45  
Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu  
50 55 60

<210> 2322  
<211> 60

<212> PRT  
 <213> Pinus radiata

<400> 2322  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His  
 20 25 30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr  
 50 55 60

<210> 2323  
 <211> 46  
 <212> PRT  
 <213> Pinus radiata

<400> 2323  
 Arg Pro Asp Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu  
 1 5 10 15  
 Ile Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala  
 20 25 30  
 Gly Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr  
 35 40 45

<210> 2324  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata

<400> 2324  
 Met Gly Arg Ala Pro Cys Cys Glu Lys Val Gly Leu Lys Lys Gly Pro  
 1 5 10 15  
 Trp Thr Pro Glu Glu Asp Gln Lys Leu Leu Ala Tyr Ile Gln Glu His  
 20 25 30  
 Gly His Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu  
 50 55 60

<210> 2325  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata

<400> 2325  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His  
 20 25 30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
 50 55 60

<210> 2326  
 <211> 45  
 <212> PRT  
 <213> Pinus radiata

<400> 2326  
 Pro Asp Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Val  
 1 5 10 15  
 Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly  
 20 25 30  
 Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr  
 35 40 45

<210> 2327  
 <211> 50  
 <212> PRT  
 <213> Pinus radiata

<400> 2327  
 Lys Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Leu  
 1 5 10 15  
 Gly Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asn  
 20 25 30  
 Phe Val Ile Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys  
 35 40 45  
 Tyr Phe  
 50

<210> 2328  
 <211> 53  
 <212> PRT  
 <213> Pinus radiata

<400> 2328  
 Lys Lys Gly Val Pro Trp Thr Glu Glu Glu His Arg Met Phe Leu Leu  
 1 5 10 15  
 Gly Leu Gln Lys Leu Gly Lys Gly Asp Trp Arg Gly Ile Ala Arg Asn  
 20 25 30  
 Phe Val Ile Thr Arg Thr Pro Thr Gln Val Ala Ser His Ala Gln Lys  
 35 40 45  
 Tyr Phe Ile Arg Gln  
 50

<210> 2329  
 <211> 48  
 <212> PRT  
 <213> Pinus radiata

<400> 2329  
 Gln Arg Glu Arg Trp Ser Glu Asp Glu His Leu Lys Phe Leu Glu Ala  
 1 5 10 15  
 Leu Lys Met Tyr Gly Arg Ala Trp Arg Arg Ile Glu Glu His Ile Gly  
 20 25 30  
 Thr Lys Thr Ala Val Gln Ile Arg Ser His Ala Gln Lys Phe Phe Ser  
 35 40 45

<210> 2330  
 <211> 42  
 <212> PRT  
 <213> Pinus radiata

<400> 2330  
 Gln Arg Glu Arg Trp Ser Glu Asp Glu His Leu Lys Phe Leu Glu Ala  
 1 5 10 15  
 Leu Lys Met Tyr Gly Arg Ala Trp Arg Arg Ile Glu Glu His Ile Gly  
 20 25 30

Thr Lys Thr Ala Val Gln Ile Arg Ser His  
35 40

<210> 2331  
<211> 61  
<212> PRT  
<213> Pinus radiata

<400> 2331  
Met Gly Arg Thr Pro Cys Cys Leu Lys Val Gly Leu Asn Arg Gly Pro  
1 5 10 15  
Trp Thr Pro Glu Glu Asp Leu Cys Leu Ser Asn Tyr Ile Glu Ala His  
20 25 30  
Gly Glu Gly Gly Trp Arg Thr Leu Pro Lys Lys Ala Gly Leu Leu Arg  
35 40 45  
Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu  
50 55 60

<210> 2332  
<211> 67  
<212> PRT  
<213> Pinus radiata

<400> 2332  
Pro Asp Val Lys His Gly His Ile Leu Pro Glu Glu Glu Asp Leu Ile  
1 5 10 15  
Leu Arg Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly  
20 25 30  
Arg Met Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Thr  
35 40 45  
His Leu Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His  
50 55 60  
Lys Pro Leu  
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<210> 2333  
<211> 55  
<212> PRT  
<213> Pinus radiata

<400> 2333  
Cys Glu Asp Leu Asp Arg Ile Lys Gly Pro Trp Ser Pro Glu Glu Asp  
1 5 10 15  
Ala Ser Leu Gln Arg Leu Val Gln Lys Tyr Gly Pro Arg Asn Trp Thr  
20 25 30  
Leu Ile Ser Lys Gly Ile Pro Gly Arg Ser Gly Lys Ser Cys Arg Leu  
35 40 45  
Arg Trp Cys Asn Gln Leu Ser  
50 55

<210> 2334  
<211> 56  
<212> PRT  
<213> Pinus radiata

<400> 2334  
Lys Gly Pro Trp Ser Pro Glu Glu Asp Ala Ser Leu Gln Arg Leu Val  
1 5 10 15  
Gln Lys Tyr Gly Pro Arg Asn Trp Thr Leu Ile Ser Lys Gly Ile Pro  
20 25 30  
Gly Arg Ser Gly Lys Ser Cys Arg Leu Arg Trp Cys Asn Gln Leu Ser

35 40 45  
 Pro Gln Val Glu His Arg Pro Phe  
 50 55  
 <210> 2335  
 <211> 34  
 <212> PRT  
 <213> Pinus radiata  
 <400> 2335  
 Met Gly Ala Pro Lys Gln Lys Trp Thr Ser Glu Glu Glu Gly Ala Leu  
 1 5 10 15  
 Arg Ala Gly Val Glu Lys Tyr Gly Ala Gly Lys Trp Gln Thr Ile Leu  
 20 25 30  
 Lys Asp

<210> 2336  
 <211> 51  
 <212> PRT  
 <213> Pinus radiata  
 <400> 2336  
 Leu Arg Lys Gly Leu Trp Ser Pro Asp Glu Asp Ile Glu Leu Thr Thr  
 1 5 10 15  
 Tyr Ile Met Arg Lys Gly Leu Met Gly Cys Trp Asn Tyr Ile Ala Lys  
 20 25 30  
 Gln Ala Gly Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile  
 35 40 45  
 Asn Tyr Leu  
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<210> 2337  
 <211> 45  
 <212> PRT  
 <213> Pinus radiata  
 <400> 2337  
 Pro Gly Leu Lys Arg Cys Ala Ile Ser Pro Gln Glu Glu Arg Leu Ile  
 1 5 10 15  
 Ile Gln Leu Gln Ser Ser Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala  
 20 25 30  
 His Leu Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr  
 35 40 45

<210> 2338  
 <211> 62  
 <212> PRT  
 <213> Pinus radiata  
 <400> 2338  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Gln Gln Glu Asp Thr Arg Leu Val Ala His Ile Arg Ala His  
 20 25 30  
 Gly Gln Gly Gly Trp Ser Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Gln Arg Trp Ile Asn Tyr Leu His  
 50 55 60

<210> 2339

<211> 39  
 <212> PRT  
 <213> Pinus radiata

<400> 2339  
 Pro Asp Leu Lys Arg Ser Asn Phe Ser Glu Glu Glu Asp Glu Leu Ile  
 1 5 10 15  
 Val Arg Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly  
 20 25 30  
 Arg Leu Pro Gly Arg Thr Asp  
 35

<210> 2340  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata

<400> 2340  
 Gly Thr His Pro Ala Pro Ser Lys Pro Lys Leu Arg Lys Gly Leu Trp  
 1 5 10 15  
 Ser Pro Val Glu Asp Asn Gln Leu Thr Asn Tyr Ile Leu Arg Arg Gly  
 20 25 30  
 Leu Val Gly Cys Trp Asn Tyr Val Ala Lys Gln Ala Gly Leu Gln Arg  
 35 40 45  
 Thr Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
 50 55 60

<210> 2341  
 <211> 43  
 <212> PRT  
 <213> Pinus radiata

<400> 2341  
 Pro Gly Leu Lys Arg His Pro Ile Ser Arg Gln Glu Glu Gln Leu Ile  
 1 5 10 15  
 Ile Glu Leu Gln Ser Ile Leu Gly Asn Arg Trp Ser Gln Ile Ala Ala  
 20 25 30  
 Gln Leu Pro Gly Arg Thr Asp Ile Glu Ile Lys  
 35 40

<210> 2342  
 <211> 61  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2342  
 Met Gly Arg His Ser Cys Cys Tyr Lys Gln Lys Leu Arg Lys Gly Leu  
 1 5 10 15  
 Trp Ser Pro Glu Glu Asp Glu Lys Leu Leu Arg His Ile Ser Gln Tyr  
 20 25 30  
 Gly His Gly Cys Trp Ser Ser Val Pro Lys Gln Ala Gly Leu Gln Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
 50 55 60

<210> 2343  
 <211> 67  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2343

Pro Asp Leu Lys Arg Gly Ala Phe Ser Gln Asp Glu Glu Asp Leu Ile  
 1 5 10 15  
 Ile Glu Leu His Ala Ala Leu Gly Asn Lys Trp Ser Gln Ile Ala Ala  
 20 25 30  
 Asn Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Leu Trp Asn Ser  
 35 40 45  
 Cys Leu Lys Lys Lys Leu Arg Gln Arg Gly Ile Asp Pro Val Ser His  
 50 55 60  
 Arg Pro Leu  
 65

<210> 2344  
 <211> 58  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2344  
 Thr Pro Cys Cys Ser Lys Val Gly Ile Lys Arg Gly Pro Trp Thr Pro  
 1 5 10 15  
 Glu Glu Asp Glu Val Leu Ala Ser Tyr Val Arg Arg Glu Gly Glu Gly  
 20 25 30  
 Arg Trp Arg Thr Leu Pro Lys Arg Ala Gly Leu Gln Arg Cys Gly Lys  
 35 40 45  
 Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu  
 50 55

<210> 2345  
 <211> 67  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2345  
 Pro Ser Val Lys Arg Gly Gln Ile Ala Pro Asp Glu Glu Asp Leu Ile  
 1 5 10 15  
 Leu Arg Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly  
 20 25 30  
 Arg Ile Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr  
 35 40 45  
 His Leu Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His  
 50 55 60  
 Lys Pro Leu  
 65

<210> 2346  
 <211> 67  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2346  
 Met Asp Lys Lys Pro Asp Asp Asp Ser Gly Lys Ser Gln Asp Val Glu  
 1 5 10 15  
 Val Arg Lys Gly Pro Trp Thr Met Glu Glu Asp Leu Ile Leu Ile Asn  
 20 25 30  
 Tyr Ile Ala Asn His Gly Glu Gly Ser Trp Asn Ser Leu Ala Lys Ala  
 35 40 45  
 Ala Gly Leu Lys Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn  
 50 55 60  
 Tyr Leu Arg  
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<210> 2347

<211> 56  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2347  
 Pro Asp Val Arg Arg Gly Asn Ile Thr Thr Glu Glu Gln Leu Leu Ile  
 1 5 10 15  
 Met Glu Leu His Ala Lys Trp Gly Asn Arg Trp Ser Lys Ile Ala Lys  
 20 25 30  
 His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Phe Trp Arg Thr  
 35 40 45  
 Arg Ile Gln Lys His Ile Lys Gln  
 50 55

<210> 2348  
 <211> 63  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2348  
 Met Asp Lys Lys Pro Cys Tyr Arg Thr Gln Asp Pro Gln Val Arg Lys  
 1 5 10 15  
 Gly Pro Trp Thr Leu Glu Glu Asp Leu Ile Leu Met Asp Tyr Ile Ala  
 20 25 30  
 Asn His Gly Glu Gly Val Trp Asn Ser Leu Ala Lys Ala Ala Gly Leu  
 35 40 45  
 Gln Arg Thr Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu  
 50 55 60

<210> 2349  
 <211> 54  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2349  
 Pro Asp Val Arg Arg Gly Asn Ile Thr Pro Glu Glu Gln Leu Leu Ile  
 1 5 10 15  
 Ile His Leu Gln Ser Met Trp Gly Asn Arg Trp Ser Glu Ile Ala Lys  
 20 25 30  
 His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Arg Thr  
 35 40 45  
 Lys Ile Gln Lys His Ile  
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<210> 2350  
 <211> 47  
 <212> PRT  
 <213> Eucalyptus grandis

<400> 2350  
 Ser Arg Glu Ser Trp Thr Glu Gln Glu His Asp Lys Phe Leu Glu Ala  
 1 5 10 15  
 Leu His Leu Phe Asp Arg Asp Trp Lys Lys Ile Glu Ala Phe Val Gly  
 20 25 30  
 Ser Lys Thr Val Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe  
 35 40 45

<210> 2351  
 <211> 59  
 <212> PRT  
 <213> Eucalyptus grandis



<400> 2351  
 Ser Trp Thr Glu Gln Glu His Asp Lys Phe Leu Glu Ala Leu His Leu  
 1 5 10 15  
 Phe Asp Arg Asp Trp Lys Lys Ile Glu Ala Phe Val Gly Ser Lys Thr  
 20 25 30  
 Val Ile Gln Ile Arg Ser His Ala Gln Lys Tyr Phe Leu Lys Val Gln  
 35 40 45  
 Lys Asn Gly Thr Ser Glu His Val Pro Pro Pro  
 50 55

<210> 2352  
 <211> 45  
 <212> PRT  
 <213> Pinus radiata

<400> 2352  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His  
 20 25 30  
 Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly  
 35 40 45

<210> 2353  
 <211> 45  
 <212> PRT  
 <213> Pinus radiata

<400> 2353  
 Met Gly Arg Ala Pro Cys Cys Glu Lys Val Gly Leu Lys Lys Gly Pro  
 1 5 10 15  
 Trp Thr Pro Glu Glu Asp Gln Lys Leu Val Thr Tyr Ile Gln Glu His  
 20 25 30  
 Gly His Gly Ser Trp Arg Ala Leu Pro Gln Lys Ala Gly  
 35 40 45

<210> 2354  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata

<400> 2354  
 Met Gly Arg Ser Pro Cys Cys Ala Lys Glu Gly Leu Asn Arg Gly Ala  
 1 5 10 15  
 Trp Thr Lys Thr Glu Asp Ile Ile Leu Ser Glu Tyr Ile Arg Ile His  
 20 25 30  
 Gly Asp Gly Gly Trp Arg Ser Leu Pro Lys Lys Ala Gly Leu Lys Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Leu Asn Tyr Leu  
 50 55 60

<210> 2355  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata

<400> 2355  
 Met Gly Arg Ala Pro Cys Cys Ser Asn Asp Asp Arg Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Gln Tyr Ile Lys Val His

20 25 30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
 50 55 60

<210> 2356  
 <211> 68  
 <212> PRT  
 <213> Pinus radiata

<400> 2356  
 Pro Asp Leu Lys Arg Gly Phe Phe Ser Glu Asp Glu Asp Asp Leu Ile  
 1 5 10 15  
 Leu Lys Leu His Ala Leu Leu Gly Asn Asn Arg Trp Ser Leu Ile Ala  
 20 25 30  
 Gly Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn  
 35 40 45  
 Ser His Leu Lys Arg Lys Leu Ile Ser Met Gly Ile Asp Pro Leu Thr  
 50 55 60  
 His Arg Pro Phe  
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<210> 2357  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata

<400> 2357  
 Met Gly Arg Ala Pro Cys Cys Ser Asn Gly Asp Arg Asn Lys Gly Ala  
 1 5 10 15  
 Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Gln Tyr Ile Lys Val His  
 20 25 30  
 Gly Glu Gly Cys Trp Arg Ser Leu Pro Asn Ala Ala Gly Leu Leu Arg  
 35 40 45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu  
 50 55 60

<210> 2358  
 <211> 39  
 <212> PRT  
 <213> Pinus radiata

<400> 2358  
 Pro Asp Leu Lys Arg Gly Phe Phe Ser Glu Asp Glu Asp Asp Leu Ile  
 1 5 10 15  
 Leu Lys Leu His Ala Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly  
 20 25 30  
 Arg Leu Pro Gly Arg Thr Asp  
 35

<210> 2359  
 <211> 62  
 <212> PRT  
 <213> Pinus radiata

<400> 2359  
 Met Gly Arg Thr Pro Cys Cys Glu Lys Asn Ile Gly Leu Lys Lys Gly  
 1 5 10 15  
 Pro Trp Thr Pro Glu Glu Asp Gln Lys Leu Ile Asp Tyr Ile Gln Ser  
 20 25 30

His Gly His Gly Ser Trp Arg Ala Leu Pro Lys Arg Ala Gly Leu Leu  
                   35                  40                  45  
 Arg Cys Gly Lys Ser Cys Arg Leu Arg Trp Thr Asn Tyr Leu  
           50                  55                  60

<210> 2360  
 <211> 66  
 <212> PRT  
 <213> Pinus radiata

<400> 2360  
 Pro Asp Ile Lys Arg Gly Gln Phe Ser Phe Glu Glu Glu Gln Thr Ile  
   1                  5                  10                  15  
 Ile Glu Leu His Ala Val Leu Gly Asn Lys Trp Ser Thr Ile Ala Gly  
           20                  25                  30  
 His Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr  
           35                  40                  45  
 His Leu Lys Lys Arg Leu Leu Gln Met Gly Ile Asp Pro Val Thr His  
           50                  55                  60  
 Arg Pro  
 65

<210> 2361  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata

<400> 2361  
 Met Gly Arg Thr Pro Cys Cys Leu Lys Val Gly Leu Asn Arg Gly Pro  
   1                  5                  10                  15  
 Trp Thr Pro Glu Glu Asp Leu Cys Leu Ser Asn Tyr Ile Glu Ala His  
           20                  25                  30  
 Gly Glu Gly Gly Trp Arg Thr Leu Pro Lys Lys Ala Gly Leu Leu Arg  
           35                  40                  45  
 Cys Gly Lys Ser Cys Arg Leu Arg Trp Met Asn Tyr Leu  
           50                  55                  60

<210> 2362  
 <211> 67  
 <212> PRT  
 <213> Pinus radiata

<400> 2362  
 Pro Asp Val Lys His Gly His Ile Leu Pro Glu Glu Glu Asp Leu Ile  
   1                  5                  10                  15  
 Leu Arg Leu His Arg Leu Leu Gly Asn Arg Trp Ser Leu Ile Ala Gly  
           20                  25                  30  
 Arg Met Pro Gly Arg Thr Asp Asn Glu Val Lys Asn Tyr Trp Asn Thr  
           35                  40                  45  
 His Leu Ser Lys Lys Leu Ile Ser Gln Gly Ile Asp Pro Arg Thr His  
           50                  55                  60  
 Lys Pro Leu  
 65

<210> 2363  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata

<400> 2363  
 Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala

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      1           5           10           15
Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
      20           25           30
Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
      35           40           45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
      50           55           60

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<210> 2364  
 <211> 67  
 <212> PRT  
 <213> Pinus radiata

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      <400> 2364
Pro Asp Leu Lys Arg Gly Ser Phe Thr Glu Glu Glu Asp Glu Leu Ile
      1           5           10           15
Ile Lys Leu His Ser Phe Val Gly Asn Lys Trp Ser Leu Ile Ala Gly
      20           25           30
Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
      35           40           45
His Ile Lys Arg Lys Leu Leu Ser Lys Gly Leu Asp Pro Gln Thr His
      50           55           60
Arg Pro Leu
      65

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<210> 2365  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata

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      <400> 2365
Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
      1           5           10           15
Trp Thr Lys Gln Glu Asp Asp Arg Leu Ile Ala His Ile Arg Ala His
      20           25           30
Gly Glu Gly Gly Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Leu Arg
      35           40           45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
      50           55           60

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<210> 2366  
 <211> 67  
 <212> PRT  
 <213> Pinus radiata

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      <400> 2366
Pro Asp Leu Lys Arg Gly Ser Phe Thr Glu Glu Glu Asp Glu Leu Ile
      1           5           10           15
Ile Lys Leu His Ser Phe Val Gly Asn Lys Trp Ser Leu Ile Ala Gly
      20           25           30
Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
      35           40           45
His Ile Lys Arg Lys Leu Leu Ser Lys Gly Leu Asp Pro Gln Thr His
      50           55           60
Arg Pro Leu
      65

```

<210> 2367  
 <211> 61  
 <212> PRT  
 <213> Pinus radiata

&lt;400&gt; 2367

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Met Gly Arg Ser Pro Cys Cys Glu Lys Ala His Thr Asn Lys Gly Ala
 1           5           10           15
Trp Thr Lys Glu Glu Asp Asp Arg Leu Ile Ala His Ile Arg Thr His
          20           25           30
Gly Glu Gly Cys Trp Arg Ser Leu Pro Lys Ala Ala Gly Leu Met Arg
          35           40           45
Cys Gly Lys Ser Cys Arg Leu Arg Trp Ile Asn Tyr Leu
 50           55           60

```

&lt;210&gt; 2368

&lt;211&gt; 67

&lt;212&gt; PRT

&lt;213&gt; Pinus radiata

&lt;400&gt; 2368

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Pro Asp Leu Lys Arg Gly Asn Phe Ser Glu Glu Glu Asp Glu Leu Val
 1           5           10           15
Ile Lys Leu His Ser Leu Leu Gly Asn Lys Trp Ser Leu Ile Ala Gly
          20           25           30
Arg Leu Pro Gly Arg Thr Asp Asn Glu Ile Lys Asn Tyr Trp Asn Thr
          35           40           45
His Ile Lys Arg Lys Leu Leu Asn Arg Gly Leu Asp Pro Gln Ser His
 50           55           60
Arg Pro Leu
65

```